NOVA BEDFORDIA CONDITA A.D.1787
LUCEM DIFFUNDO
CIVITATIS REGIMINE DONATA A.D.1847

CITY DOCUMENTS.

MAYOR'S ADDRESS

TO THE CITY COUNCIL,

CITY GOVERNMENT,

ANNUAL REPORTS, ETC.,

FOR THE YEAR 1893–94.

NEW BEDFORD:
EVENING JOURNAL COMPANY, PRINTERS TO THE CITY,
1894.

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1894—CITY DOCUMENT NO. 1.

ADDRESS

OF

STEPHEN A. BROWNELL,

Mayor of New Bedford,

TO THE

CITY COUNCIL,

January 1, 1894.

NEW BEDFORD:
EVENING JOURNAL COMPANY, PRINTERS TO THE CITY.
1894.

ADDRESS.

Gentlemen of the City Council:

In accordance with a well-established and approved custom, you have been qualified as members of the City Government and have assumed a very important trust. To further follow the practice of our predecessors, I will call your attention to the requirements of some of the departments, and refer to some of the questions and problems which are or will be presented to us for consideration, and probably for solution.

FINANCES.

From statements prepared by the City Treasurer I am enabled to give you the following facts relating to the present financial standing of our city. On account of the financial year closing only yesterday, you can readily comprehend the absolute impossibility of having all accounts completely known and settled; so that while exact returns cannot be presented to-day, yet the statements are sufficiently correct for all purposes required at this time.

TAXES.

Tax levy for the year 1893,	$804,290.16
Collections,	770,587.18
Balance uncollected,	$33,702.98

The Collector of Taxes has been credited as follows:

Amount paid State Treasurer, State tax,	$44,825.00
Amount paid County Treasurer, county tax,	57,609.11
Amount paid City Treasurer, city tax,	629,559.57
Discount and abatements,	38,593.50
Total credits to date,	$770,587.18

About 4.2 per cent. of the whole tax now remains unpaid, a large amount of this being for poll taxes.

The receipts from the State, for corporation and other taxes, amounted to $76,758.13; of this sum $10,000 was used to provide, in part, for the discount of 5 per cent. allowed on all taxes paid by Oct. 15, and the balance placed to the credit of unappropriated funds.

RECEIPTS AND EXPENDITURES.

The approximate receipts and expenditures for the year, including the balance in the treasury, January 2, 1893, have been as follows:

Balance, Jan. 2, 1893,	$16,000.00
Receipts from all sources,	1,870,000.00
Total receipts,	$1,886,000.00
Expenditures,	1,873,000.00
Balance, Jan. 1, 1894,	$13,000.00

The amount received on temporary loans during the year, and included in the above receipts, was $595,000.

The increase in the amount received for water rates over the previous year was $9,000.

APPROPRIATIONS.

The appropriations, general and special, including also the amount due from this city for the construction of the Coggeshall street bridge, have been as follows:

General appropriations,		$674,000.00
Special appropriations,		231,000.00
Coggeshall street bridge, with interest,		31,000.00
Total,		$936,000.00
Special appropriations, as above,	$231,000.00	
Coggeshall street bridge,	31,000.00	$262,000.00
Deduct from this sum balance of unappropriated funds,		47,000.00
Amount to be provided for in 1894,		$215,000.00

MUNICIPAL DEBT.

The debt of the city at this date is as follows:

Water bonds,	$540,000.00	
Park loans,	100,000.00	$640,000.00
Improvement bonds,		717,000.00
Sewer bonds,		466,000.00
Gross bonded debt,		$1,823,000.00
The trust funds are as follows:		
Sylvia Ann Howland bequest—water loan,	$100,000.00	
Library funds,	16,100.00	
Jonathan Bourne prize fund,	1,000.00	
Cemetery fund, care of lots,	24,094.93	141,194.93
		$1,964,194.93
Temporary debt,	$80,000.00	
Balance of special appropriations,	135,000.00	215,000.00
Total debt,		$2,179,194.93

DEDUCTIONS, ASSETS.

Balance of cash, Jan. 1, 1894,	$13,000.00
Due from State—State aid,	9,500.00
Balance due for corporation tax,	13,000.00
Taxes collectable,	20,000.00

Sundry bills due city,	$10,000.00	
Sinking funds,	280,000.00	$345,500.00
		$1,833,694.93
Deduct from this sum:		
Water debt,	$640,000.00	
Park loan,	100,000.00	740,000.00
Net city debt, affecting debt limit,		$1,093,694.93
Net Jan. 1, 1894. Debt as above,		$1,833,694.93
Net Jan. 2, 1893. Debt as above,		1,708,123.39
Increase during year 1893,		$125,571.54

The average valuation for the past three years is $41,048,317; under the law, the limit of indebtedness of our city (exclusive of water debt and park loan) is fixed at 2 1-2 per cent. of the sum above named.

Net debt as above stated,	$1,093,694.93
2½ per cent. on average valuation,	1,026,227.92
Excess over debt limit,	$67,487.01

To provide for the latter named sum it will be necessary for the Council to seek relief through the General Court. I would, therefore, recommend that measures be taken at once to be relieved of the operation of the act for at least five years, when it is hoped that the tax value of our city will have been so increased as to enable us to keep within our general appropriation.

In this action we are only duplicating what most other cities in the Commonwealth have been compelled to do previous to this time. With the growth of a city, as with the growth of a family, the expenses must necessarily increase. With this growth also follows the development of property and increase of valuation, and were it possible to equalize and increase valua-

tions in proportion to the city's growth, the tax levy should at least meet the annual running expenses.

Bonds to the amount of $130,000 will mature on the first of October next, as follows:

Water bonds, 4s,	$100,000
Water bonds, 6s,	20,000
Improvement bonds, 6s,	10,000
	$130,000

Deeming this too large a sum to add to the tax levy the present year, I have thought proper to recommend that at least $80,000 of said water bonds be rebonded and a sinking fund established to take care of them at maturity. I have learned from the City Solicitor that it will be advisable to petition the Legislature for authority to carry out this plan. I therefore recommend that you take early action to secure this legislation.

I am informed that this is the first instance in the history of the city that bonds have not been paid when falling due without rebonding. This is the largest amount maturing in any one year that had not been provided for by the establishment of a sinking fund, and that such sinking fund was not provided for want of authority of law at the time of their issue.

Under chapter 247 of the acts of the Legislature of 1893, entitled "An act authorizing assessors in cities of less than 100,000 inhabitants to use the valuation of the year preceding as a basis of taxation," the City of New Bedford can, the present year, appropriate for municipal purposes, exclusive of the State and county taxes and sums required for public debt, $533,000. This sum is at least $50,000 short of the amount required for such purposes. If we add to the latter named sum $215,000, which is the balance of special appropriations

of 1893, and the city's portion of the cost of the Coggeshall street bridge, which is about $31,900, we have a deficit of $265,000. As an offset to this sum the receipts for the year may be estimated as follows:

Liquor licenses,	$43,000.00	
Sundry licenses and fees,	1,700.00	
Interest account,	2,300.00	
Permits to enter sewers,	900.00	
Rents, armory, City Hall, etc.,	800.00	
Corporation tax,	50,000.00	
National bank taxes,	3,000.00	
Tax on ships in foreign trade,	1,200.00	$102,900.00
Deficit, as above,		$265,000.00
Less estimated receipts,		102,900.00
Net amount to be provided for,		$162,100.00

Should the estimated receipts be used to supply the deficit, as indicated above, we are then left without a dollar for sewer construction, school houses, now much needed, together with other necessary permanent public improvements aside from that required for regular municipal expenses.

The rate of taxation for municipal purposes established by law cannot exceed $12 per thousand. Upon this basis a tax levy of $533,000 is derived. The county and State taxes, constantly increasing, cannot be less than last year; therefore, to raise the $533,000 and a sufficient sum to pay the State and county taxes and the amount required for city debt, our rate of taxation can be no less than it was in 1893, viz., $17.56 per thousand, which, I submit, is as much as is wise to assess. It is estimated we have $162,100 to provide for before we can pay for any school houses or needed permanent improvements. It is therefore safe to estimate that we shall require $250,000 to be raised by the issue of bonds to pay the

estimated deficit and provide for absolutely needed permanent improvements, not to mention bridges, water, or State road to Fall River. The city cannot issue any bonds or increase its debt. Why? Simply because the State law plainly says: You have exceeded your limit already by $67,487.01. This result, however long it may have been in process of accumulation, was not prevented but really culminated, in 1893. The administration of 1894 has this problem forced upon them for solution. It being a different and more embarassing situation than New Bedford has seen before, we shall have to proceed differently and adopt new and heroic treatment, but not new nor unlike that which has been applied in Fall River, Gloucester, Brockton, and many other Massachusetts cities. Let us take counsel from our sister cities. Let us advise with our best local financiers. Let us act promptly, wisely, judiciously. Let us not hesitate and neglect till too late before we petition for necessary legislation.

SCHOOL DEPARTMENT.

Although the condition of our city's finances demands the exercise of economy, yet we cannot afford to neglect any action or expenditure which is required to provide sufficient facilities for the education of our children. Our form of government, which is universally conceded to be the best yet developed by the intelligence of man, is universally acknowledged to be founded upon the fullest education and superior intelligence of its citizens for its greatest degree of success and perfection. Ignorance is its greatest foe and most dangerous enemy. Therefore, while we can omit improvements which aid our physical comfort and convenience, we cannot afford,

even on the basis of economy, to neglect providing needed facilities for the education of the youth of our city.

The School Committee, inspired by the grand object which their duties are intended to accomplish, without the inducement of salaries, devote much time and thought to the honorable work. These gentlemen, who are not looking for political honors, but are simply interested in the elevation of mankind mentally and the welfare of their fellow men, have presented a statement of what they deem absolutely necessary to continue New Bedford's system of education in order to furnish necessary school buildings to maintain New Bedford's honorable and distinguished standing, which she has acquired in affording opportunities for a liberal and general education of all her children. The facts, suggestions, and recommendations of the Superintendent, which follow, are largely such as I can freely indorse.

SCHOOL DEPARTMENT — SUPERINTENDENT'S SUGGESTIONS.

The rapid growth of the city in the last decade has so increased the pupils in attendance upon the schools that it has been necessary to build during that time a number of new buildings, and to remodel and enlarge several old ones that they might be accommodated. There is now an enrollment of 7,000 pupils, where ten years ago there were about 4,500, notwithstanding four large parochial schools have been opened in that time.

At present the Fourth street school house, an old wooden structure of six rooms, is being replaced by a fine brick one of eight rooms. The Acushnet avenue school house is also being

enlarged from a six-room building to one containing ten rooms. The Sylvia Ann Howland school house, an ornate and finely equipped building, supersedes the William street school house, an old wooden structure, unfit for school purposes. These buildings will furnish ample accommodations for the pupils in the center of the city. A serious mistake is made, however, in erecting so fine buildings upon lots that admit of little or no playground for the children. In the case of the new Fourth street building, there is not sufficient space between it and other buildings to permit the free circulation of air about the building and the entrance of sunlight into the school rooms,— a most necessary requisite for the health of the pupils. A proper foresight is not exercised in the purchase of lots for school houses, and great inconvenience and loss of time have ensued to the schools in the past from the delay in purchasing lots and erecting buildings.

A large building is now needed in the Linden street school district, part of the pupils in that district being housed for the past year in a rented and inadequate building; nor is there provision for an increase of pupils in the southwest part of the city, every school room in that section being now in use, including several finished off during the last two years in the attics of the Thompson street and Dartmouth street school houses.

It would, therefore, be good policy for the city to purchase lots at once, both in the northwest and southwest sections of the city, and steps be taken for the erection upon them of suitable school houses. If this is not done, the school department will not be able to provide in a suitable manner for the increase of pupils in those sections the coming year.

Another matter of consideration is this: The school department is occupying leased premises for its offices; its present quarters are hardly adequate for the demands that a growing city makes upon it. A suitable building might be erected upon the William street school house lot, which would accommodate the school department, which is now occupying leased premises, with advantage to the city.

The day schools now require the services of about one hundred and fifty teachers, and the evening schools about sixty. To pay these and the janitors and keep the school houses in repair, purchase fuel, text books, and other supplies, requires at the present the expenditure of $145,000 per annum. Yet to provide for the natural increase of pupils, and at the same time to offer the children of New Bedford such advantages in the schools as will best fit them for future citizenship, means increased expenditures and not smaller in the succeeding years.

The suggestion in relation to the disposition of the old school house on William street is worthy of consideration, but, entertaining as I do the hope that some day in the near future a city building may be constructed of ample dimensions to provide suitable room for all officials and boards of officers included in our municipal machinery, I cannot now indorse a plan which contemplates the expenditure of money to construct a building for one board of officers alone. I should prefer that the city continue to hire quarters until a suitable city building is provided.

The two new houses to which your attention is called are undoubtedly absolutely required. And I recommend that the City Council take early action, that land may be secured and plans obtained and adopted, on or before April 1, that the

work may be in the hands of the contractors at least by May 1, so that the city may have the best opportunity for securing good construction at the least cost and avoid the poor economy of building during the winter months. Failure to comprehend the necessity of prompt action has often proved an expensive error for our city.

I think the criticism by the Superintendent of the cost of some of our school buildings is correct, and I recommend that after securing building sites, the next important result to be obtained is a plan which guarantees substantial construction, complete convenience and adaptation, good light, sufficient heat, and perfect ventilation. While I am opposed to extreme plainness, I believe money expended in fashionable ornamentations may prove an extravagant waste, from the fact that styles change so fast that what we deem as ornamental to-day is soon discarded. I think a plan might be adopted which, with some slight changes, could be adapted to any location, which would include all that is found to be desirable in a school building and save a considerable amount in the future cost of our school houses. In this regard the fire department has approximately given a good example to follow.

BOARD OF PUBLIC WORKS.

Pardon me for taking up so much of your time on this department, as in dealing with the city's interests and welfare it is second only to our schools, while it involves the largest expenditure of any department. The streets are constantly used by all classes of citizens, and the sewers are closely connected with the good health of our whole city. No person is not interested in this important department, and the interests

intrusted to its care are in close touch with every individual. I have, therefore, deemed it desirable to investigate and compare to some extent the work performed, results accomplished, and money expended for the past four years, that I might have a correct understanding upon which to base intelligent action in regard to appropriations or other action relative to this Board, to the end that harmony of action may be secured and the best possible results obtained in the interest of our growing city. I find from a very complete detailed statement, furnished by the Superintendent of the Board, some very interesting facts which would occupy too much space to include in this address, but as the same statement will be included in the annual report of this department, I invite you to carefully study it there, in order that you may have the knowledge upon which to base future action.

From a careful perusal of this report of the Board, I am able to arrive at the following conclusions: That less money was expended in this department last year than any year since 1890; that less has been expended in the purchase of supplies, machinery, and permanent structures; that the value of stock and material on hand is greatly reduced; that while various credits in the form of unexpended appropriations remained to be used last year, there is little left over to 1894; therefore it appears, while less was expended last year in this department than in the previous two years, yet to expend even the same amount this year would require an increased appropriation, as there seems to be less available credits and unexpended funds inherited from the previous year, while in my judgment, many neglected streets visibly needing attention must be put in condition as soon as weather permits. In other words, with less

to the credit of the department, more work is necessary to be done, a portion of which is that which was neglected last year; and this applies both to streets and sewers. It is proper that the City Government, and also the people, should understand this fact.

Attention is called to the advisability of continuing the extension of Grape street sewer, which would be in accordance of a plan adopted several years ago when this trunk sewer was wisely determined to be necessary, and that it should be gradually constructed in annual instalments, as it would incur too large an expenditure to complete it by unbroken continuous construction.

Your attention is also called to the growing nuisance of several sewers, viz.: The Merrimac street sewer, because of emptying into shallow water where the tide is not active in removing the sewage; and of Bonney street sewer, which flows upon a marsh and remains there to a great extent, endangering the health of our citizens. In this connection I wish to call your attention to a suggestion of the Board of Health, wherein the Board, after referring to these same sewers and some others as growing nuisances, suggested that there was much uncertainty as to the correctness of our sewerage system; that too little attention had been paid as to where sewers emptied, size, construction, depth, etc., and one member in particular suggested that a thorough examination of our sewerage system should be made by an experienced scientific sanitary engineer, that it might be determined what system should be continued, and, if we were going wrong, that changes might be made before a larger cost would be required to rectify greater errors. While I see no harm in the agitation and discussion

of this subject, I have not sufficient knowledge for any definite recommendation, except that a proper committee might be authorized to confer with the Board of Health and Public Works, and, after thorough consideration, recommend such action as may be deemed wise and practical. Whatever may be the condition of completed sewers, I have no doubt that some action looking to relief from the effects of the nuisance created by Bonney street sewer must be soon considered.

BOARD OF HEALTH.

This department as now constituted is apparently accomplishing good work, to the approval of a large majority of our citizens. The plan adopted for the disposal of garbage is claimed to be demonstrated as a great success and a large saving of expense over the cost of a crematory. Lowell and some other cities have discontinued their crematory plants on account of their excessive cost, which seems to prove the wisdom of waiting for some other cities to try the experiment. This Board strongly urges the extension of Bonney street sewer, as I have already stated in connection with the Board of Public Works. This department having gained the confidence of the public in the heroic treatment of small-pox two years ago, the dread of an epidemic is lessened, and public fear would be much reduced by the confidence then established should any fatal contagious disease be again discovered in our midst.

FIRE DEPARTMENT.

The efficiency of this department continues to be demonstrated by the record of each succeeding year. The liberal expenditure in providing additional facilities proves that our

citizens appreciate the value of this department in protecting life and property from that terrible element of destruction.

After consulting with the chief of the department, I wish to call your attention to some apparent opportunities for strengthening this important branch of our municipal machinery: First, that the new engine house at the corner of Davis street and Acushnet avenue be equipped with a steamer and hose wagon; second, that a combination chemical engine be placed in the house now occupied by Hose No. 2; and third, that a Hayes truck be placed in the house of Hook and Ladder No. 2.

I urgently request you to give these suggestions careful investigation. I am informed by the Mayor and chief of the fire department of Fall River that, after one year's trial of a chemical engine, they heartily approve of it as an important and invaluable factor in the department, that it performs effective work which the other engines cannot do, often with a great saving of loss from water, and that it is considered a valuable auxiliary to the steam fire engines. I advise careful investigation, and a report of the results of the same, together with such recommendations as you are convinced will be for the best interest of the department, trusting you fully comprehend that the location of our city is such that we must largely depend upon our own resources in protecting our city from fires.

POLICE DEPARTMENT.

The police department, as now constituted, consists of 84 persons, viz.: One chief, two captains, seven lieutenants, two inspectors, fifty-six patrolmen, nine housekeepers, one clerk, one matron, one janitor, two wagonmen, two drivers.

The efficiency of this department has been improved during the past year at considerable expense by an increase of eleven patrolmen and two housekeepers. The large growth of our city, with its increased population, extending over additional territory, undoubtedly demanded increased police protection, and, therefore, the expenditure is probably fully justified in the minds of our citizens. Believing that all portions of our city should share in the protection afforded by the police department, I see no reason for an attempt to reduce expenditure in this organization by reducing the force, although it may be a question for you to consider whether the increase in the salary pertaining to the office of the Chief of Police, made last year, is required to obtain the services of a competent person, or in keeping with the talent and work required when compared with the salaries paid similar officials in other cities of equal population.

The citizens have largely petitioned for a police and voting station at the west of Cedar street in ward three, which has been referred to this government. I recommend that you carefully consider the petitioner's request, and, as the servants of the whole city, endeavor to act wisely and comply with the expressed wish of our fellow citizens whom we represent, if upon investigation it is demonstrated the needs of our city are not misrepresented. This improvement is also called for and endorsed by the police department. This department also calls for a lighter patrol wagon, an additional sleeping room at the patrol station, and the extension of the signal system by the location of six additional boxes. It is also suggested that some rule be adopted whereby the pay of members may be regulated when on the sick list; also regulating the pay and

disposition of members who have become incapacitated from performing full duty on account of age. It is further suggested that some changes be made in the character of the uniform worn by the officers and members of the force. The chief of this department also recommends that a suitable place be provided for regular drill of the force and that an annual parade and inspection be a feature of the department. I refer the various suggestions and recommendations of this department to your careful consideration, believing you will not be hasty in your conclusions and that you will neglect nothing which will promote the efficiency of this department that in your judgment the city can afford to provide.

CEMETERY DEPARTMENT.

In response to my letter of inquiry, the Cemetery Commissioners have submitted the following information and suggestions, viz.:

We believe that the records of the public cemeteries should be as soon as possible placed in such condition that any interested party may easily acquire definite and exact information as to the ownership of lots, the number, size, and location of all lots held for sale, and, as nearly as may be possible, the exact location of every grave, with the name, date of burial, age, etc., of the person therein buried.

We believe that there are a number of burial lots the titles of which are not vested in any living representative of the original purchaser; such representatives should be sought out and the right to bury properly transferred.

We believe that correct plans showing the location of the lots, graves, etc., should be made as soon as possible, and that

they should be easily available both at the cemeteries and at the rooms of the Board.

We believe that no lots should be sold except they first be fitted for immediate use.

We believe that the establishment of a management having some prospect of permanence will result in a more careful keeping of the records and a policy affecting the improvements in the cemeteries which will be superior to that likely to be encouraged by a frequent change in the management.

In support of these views, we would refer you to either of the resident sextons at our cemeteries.

Pardon me for my confession of ignorance, but I frankly admit that I have not had time to ascertain from the friends and originators of the new ordinance creating this commission, what argument or array of facts and experience governed and induced them to make this departure. I therefore cannot intelligently express an opinion as to its value or improvement over the long established custom or the legal standing of the controversy. If its only object was to displace an undesirable official, its existence need not be permanent. If it was to secure and establish a permanent system and to improve upon the method of conducting cemetery management, a better reason is afforded.

The communications herewith submitted include some argument in its favor, and the suggestions and recommendations are worthy of consideration, especially if based upon a condition of affairs such as the language indicates. If there is doubt about titles to burial lots, or indefinite information as to the identity of graves, the suggestions are surely worthy of consideration. This is at least a matter where hasty action is not

judicious, and which certainly should not be condemned until investigated and thoroughly understood. I recommend that the committee on cemeteries give the whole subject full consideration, including the position of the city in reference to its obligations to both parties claiming control of the cemetery management, and report to the City Council at an early date. Should it be found to be a commendable experiment, do not condemn it because it originated with other authors, but give ample opportunity for trial.

CITY LAND SURVEYOR.

It has been my intention to confer with or write to every city department for any facts, suggestions, or recommendations which might be communicated, for the purpose of placing myself in touch with each department, thereby being enabled to transmit to you all the facts connected with the city's interest. The City Land Surveyor has very kindly responded to my letter of inquiry and furnished me with detailed information regarding the work performed and the cost of the same during his connection with this office. He has also furnished me with the ordinance creating and controlling this department; he also gives information as to the progress made in platting the city by the contractors, Messrs. Shedd & Sarle, and, as one of the supervisors, he reports the work to be satisfactory and the progress in accord with the requirements of the contract. I find by the reading of the specifications relative to platting the city that the contract contemplates the appointment of a special committee of the City Council to have charge of the same. I recommend that such committee be appointed early in the year. In carefully reading this lengthy and detailed report,

previously referred to, I am led to believe that valuable work is being performed without any increased expenditure to the city. The department as now constituted consists of the Land Surveyor and four assistants. The approximate cost of the department for the last year was $5,100, which, from the statement presented, does not indicate any increase over previous years. I have not conferred with any one opposed to this departure, and have therefore listened to no adverse criticism. With the knowledge I have, I am inclined to think well of the results of this experiment, as it appears to be a valuable addition to our municipal machinery without increasing the annual expenditure.

WATER WORKS.

This very important department calls upon you to consider some questions involving a large expenditure that is made necessary by the generally admitted necessity of providing for an increased water supply to adequately meet the present and future demands of our growing city. All of the increased expenditure for several years has been required to meet the enlarged needs of a city which has more than doubled in inhabitants. Our city is not bankrupt, and no intelligent citizen regrets our growth. While it is necessary to secure some important legislation and consider and devise plans and finally determine upon the right course of action, no frightful haste is necessary. And, although we have to meet a troublesome financial problem, still by wise action all the difficulties will be overcome, the credit of our city will be preserved, and the additional water facilities secured, and at the same time the rate of taxation not materially increased. I call your attention to the suggestion of the Superintendent of

the Water Board, which I embody in full in my address, and ask you to give it the careful consideration which its importance demands. I also refer you to a partial report of the investigation of this Board the past year, which is now on file with the City Clerk.

Communication from R. C. P. Coggeshall, Superintendent Water Works.

The affairs of the New Bedford water works will require careful attention by you. This is a very important matter and ought not to be delayed. If our city is to continue to prosper, as no doubt it will, an adequate water supply is absolutely necessary to continue that prosperity. Every industry in our city, both great and small, depends wholly upon the water supply for its operations. None have the option of a supply from other sources, as is often the case in other manufacturing cities.

The entire supply flows to the city from the reservoir at Long Plain through a single ring brick conduit of rather frail construction and not intended to be overtaxed. This conduit is now delivering its full capacity during the extremely cold and warm seasons, and there are days when the consumption far exceeds that capacity for a few hours.

In case of needed repairs, the conduit could not easily be spared long enough to prosecute the work without danger of embarrassing the consumers. An accident at any part of its line might compel such repairs as would deprive the entire city of its supply before said repairs could be completed, entailing not only inconvenience to takers, but also heavy financial loss to our industries. Do not regard me as a calamity seeker, but surely it is necessary that all important

parts of our water supply should be duplicated, thus guarding against an accident at any one place.

An additional supply cannot be quickly obtained. After a general plan has been adopted it will take some time to carefully prepare its details, and a longer time will be required in construction. The preliminary work is now well under way. In pursuance of an order sent by the City Government to the Water Board last May, they have given the matter careful investigation; they presented a partial report of their proceedings, including the report of their engineers, on November 23, and they are now acting under instructions in the preparation of a petition to the Legislature calling for the necessary enactment.

Their work will soon be submitted to you for such action as you may deem proper, and I would recommend that there be no delay in the movement to secure necessary legislation from the approaching term of the General Court.

This additional supply is an absolute necessity. The exigencies of the case make it imperative that the work shall be done as soon as possible. The financial aspect of the case does not appear as clear. Here is a perplexing problem and one that may prove difficult to solve in our present financial condition, but will be undoubtedly satisfactorily adjusted when the work shall have advanced to a point where the money is needed to proceed with and complete the work.

STATUS OF THE BRIDGE QUESTION.

By chapter 368 of the acts of 1893 the County Commissioners are authorized and directed to either reconstruct the present bridge or construct a new bridge. The expense in

either case, exclusive of the cost of the changes in the approaches to the bridge on the New Bedford side, not to exceed $200,000; the total cost of the bridge and the approaches to be borne in the first instance by the county. The County Commissioners may require the Mayor and Aldermen to bring proceedings for the abolition of the grade crossings within the city limits over said railroad. In case such proceedings are brought and as a result the grade crossings are abolished, the railroad company must pay 65 per cent. of the total cost of abolishing and the Commonwealth and the city the remaining 35 per cent., but in no case is the city to pay over 10 per cent. of the same, and if the grade crossings are abolished under the provisions of the bridge act, then the cost that would otherwise fall upon the city for that purpose is to be added to the total cost of the construction of the bridge to be paid for by the county. The total expense of building the bridge with the city's proportion of abolishing the grade crossings will all be paid by the county, and eventually proportioned among the cities and towns in Bristol county and Plymouth county, as they are respectively benefited. Any loan made by New Bedford in payment for the bridge is not to be included in the debt limit.

Having presented the standing of the question, I frankly admit that I am not sufficiently informed to make any explicit recommendation at this time, except that I advise full and complete investigation, so that we may be able to take intelligent action at the proper time. We must all admit the need of additional bridge accommodation; but when we can best afford to proceed and how to best accomplish the same must be determined after an exhaustive investigation.

The question of abolishing grade crossings involves so many interests and the expenditure of so much money that it becomes a grave question that should not be hastily determined. All parties affected should be heard, that we may understand if any of our business enterprises desirable to be retained here would be crippled or driven away, or whether some of the more important grade crossings may be abolished without adopting a continuous system.

POOR DEPARTMENT.

I am informed by the secretary of this important department that the requests for aid are in excess of any previous record, and that the almshouse has more occupants than at any time for twenty-five years. When we consider how many have been partially or wholly unemployed during the past five months, this result is to be expected; although the expenditure of this department may be materially increased, yet if the suffering of our more unfortunate fellow-beings can be lessened or prevented we have cause for feeling thankful rather than reason for criticism. From personal observation I am satisfied that while the deserving are assisted, very little is wasted on imposters. The records are well kept, good discipline and perfect system are evident. The utmost harmony prevails in this department, and the evidence of experience and knowledge which is disclosed in the management of its important work gives me great satisfaction.

FREE PUBLIC LIBRARY.

I have a communication from Robert C. Ingraham, librarian, accompanied by the last report of the trustees of the Free

Public Library, from which I learn that improvements recommended were acted upon by the last City Government, some of which are completed, while the card catalogue of subjects is now in progress of preparation. The patronage of this institution on Sundays has increased to such an extent that Sunday opening is no longer considered an experiment. The trustees present many facts and an able argument to show the needs of a new library building containing increased facilities and more modern fire-proof protection. While this need exists it may be well to have some object in view in connection with other needed buildings and permanent improvements, greatly required to equip our city of sixty thousand inhabitants with such a city building as other cities of equal population have provided.

The need is admitted, but a favorable time in the condition of our finances and the general prosperity does not exist. Further than to keep in view the advisability of securing a desirable location when an opportunity is presented, I cannot submit any recommendation at this time. Consideration, discussion, agitation, and investigation are elements of little expense, while they afford sources of education and information, which may prepare the mind and the way for the accomplishment of some permanent improvement in this direction, at a time when our city's wealth and prosperity will warrant the expenditure consistent with sound economy. The question of trust funds, which has been under discussion the past year, I have considered under a separate head.

INSPECTOR OF MILK AND PROVISIONS.

As time passes on and our legislators become convinced of the importance of protecting the people from various diseases transmitted from domestic animals through the medium of milk and meats used as human food, and particularly the disease called tuberculosis or consumption, which is now conceded to be easily transmitted from the animal to the human being, the duties of this office have been increased in number and responsibility by legislation and the importance of the office in its relation to the public health greatly increased and appreciated. The present incumbent seems to have displayed ample ability and good judgment in performing his important additional duties and receives the approbation of both the State Board of Cattle Commissioners and the public at large. For a detailed report of this department I refer you to his annual report, which will be presented and printed with the city documents.

INSPECTION OF BUILDINGS.

This department has existed under present organization only since August 6th of the past year, while the ordinance defining the duties was passed only on September 14th. So that its existence covers a period of about four months. While little time is afforded for judging by experience of the value of the change, yet I am informed that the practice of other cities commends the course adopted. I find the present incumbent has equipped his office with various books, certificates, and forms of record by which the work can be systematically conducted. One hundred and four permits were issued during the past four months, which included alterations and repairs, as well as new buildings. It is estimated that 340 buildings of

all classes were erected during the past year, at a cost of $1,800,000. I have not had an opportunity to carefully examine the ordinance creating this department or to inform myself of the net cost to the city, but so far as I am able to judge it seems to be a step in the right direction.

The proposed rules governing the inspection of buildings have been referred to this government, which I hope will have complete consideration before action is taken. The mistake may be easily made of trying to imitate too closely rules which are practicable in much larger cities, but which would not apply to our city. We do not want to adopt any rule which would work upon application as an arbitrary and unnecessary hardship, without accomplishing any protection required. I counsel investigation and discussion and action based only on the most complete information.

CITY SOLICITOR.

With a population of sixty thousand the responsibilities and duties of the City Solicitor have greatly increased beyond what they were a few years ago, when our city was only half the present size and population. Upon no department does the loss or saving of the city's money depend so directly upon promptness, industry, and wisdom, as in this department. It appears to me that the custom of paying a nominal salary to this official, and then expending large sums for his assistants, makes the cost of this department indefinite, and furnishes an opportunity for uncertain and large expense, when a known and ample compensation, which should cover the whole expense of the department, including assistants, would be more in keeping with economy and practical business management. I

recommend that you learn the practice of other cities, and consider the propriety of taking action on the line of my suggestions, if your investigations should lead you to confirm the opinions I have expressed.

ORDINANCES.

A revision of the ordinances was made in 1882, since which time a great number of amendments, changes, and additions have been made. The natural consequence was that many complications existed, and much time and effort were necessary to interpret and construe the exact meaning of some of the city's ordinances by the legal fraternity, to say nothing of the difficulties experienced by the average citizen. In 1892 a committee of the City Council was constituted and authorized to employ aid and secure a thorough revision and arrangement of the ordinances, and have them printed in book form. I am not informed how near that work has been completed, but I have noticed that many additions and changes were proposed and acted upon during the past year. Recognizing the importance of having our city ordinances compiled in a correct and intelligible manner, I respectfully recommend that early action be taken to ascertain what is required to complete the work, and adopt some method whereby it may be accomplished.

STREET LIGHTS.

I am well aware of the arduous duties devolving upon this committee. The lighting of our streets is very important, both in cost and convenience. Some years ago a contract was made by which the night was divided into fractions, which has since been continued in force. By this arrangement expense

was saved, and the waste of running in opposition to the moon was partially prevented, although the care and labor of the committee was increased. With the growth of the city the cost is continually augmented, and I therefore recommend in the interest of economy that all portions of the contract which permits the use of the moon, even on fractions of the night, be continued, and every effort be made to avoid paying for light when moonlight can be utilized with satisfactory results.

TRUST FUNDS.

At my request, the City Solicitor (who has recently made an exhaustive investigation regarding the condition of the trust funds held by the city) has furnished me with the following information and suggestions relating to these funds, viz.:

The present condition of the trust funds of the city is not satisfactory. From time to time our city has been the recipient of charitable gifts for the purposes of our library and schools. The sums of money so given have been paid into the city treasury and used for the general purposes of the city and are now represented only by book credits on the books of the City Treasurer. The same considerations apply to the money deposited with the City Treasurer for the care of burial lots. The aggregate amount of such gifts and deposits is nearly $140,500. These funds should be reinstated as actual funds and properly invested in such securities as are legally permissible, and the income of the same applied strictly in conformity with the directions of the donors. To accomplish this, it may be necessary to issue bonds of the city and negotiate sales of the same. Inasmuch as these trust funds are at

present figured by the City Treasurer as a part of the total indebtedness of the city, the issuing of such bonds will not in any way change the conditions of the debt limit. In the execution of these trusts the city should be influenced by the same considerations of strict integrity and scrupulous fidelity to legal requirements as govern individual trustees. The present provisions in relation to our trust funds are open to serious criticism, and it may be necessary to revise the present ordinances relating to said funds, making such provisions for a proper method of investment and expenditure as shall preserve the integrity and security of said funds and execute the intentions of the donors.

I recommend that this subject be early referred to a committee of the City Council, that it may have the careful consideration which its importance demands. It seems certain that the city is paying a larger rate of interest upon this part of the city debt than would be required to secure a long time loan in open market, and our citizens are being taxed to pay this difference of interest, which will amount to no small sum in a period of fifty years. The question of whether the city, in any case, by accepting a trust fund under specified conditions, has become legally obligated to allow a certain rate of interest, involves investigation from a legal standpoint, which should receive full consideration.

PARKS AND PARK COMMISSIONERS.

At my request, the City Solicitor has furnished me with the following opinion and information regarding the legal status of the parks and park commissioners:

The condition of the Board, as I understand it, is this: The City of New Bedford purchased several tracts of land for the purposes of parks, and authorized the issue of $100,000 of bonds with which to pay for them, a portion of which only was used for that purpose. The Park Commissioners thereupon organized, but before the land purchased by the city for parks could be utilized as parks, and before the Park Commissioners as such could have any authority over them whatever, the law requires that the Park Commissioners shall formally condemn the land for the purposes of a park, and give notice to abutters of that condemnation, as well as have it duly recorded in the registry of deeds. These formalities have never been complied with, and consequently there are no legal parks, and the City Council of New Bedford can to-day, as I understand it, sell the property which they purchased for those parks. The right to assess betterments upon land abutting upon the parks arises only upon the taking by the Park Commissioners of the land for park purposes in the manner above suggested, and the authority of the Park Commissioners as such in dealing with the parks and with the proceeds of park bonds, arises at the same time. Therefore I think it would be eminently proper for you to recommend that the Park Commissioners should proceed to take for park purposes the land purchased by the city for that purpose, in order that they may exercise the authority which is contemplated by the statute.

Feeling deeply interested in this subject, and desiring that the city shall lose no right or advantage from any neglect of this Board, I earnestly recommend that the Park Commissioners take such action as is deemed necessary by the city's legal adviser in order to comply with the requirements of the statute,

that the Board may secure for the city all the rights and advantages which the exercise of the authority delegated by said legislation contemplates and provides.

LIQUOR LICENSES.

The citizens have prominently demonstrated their approval of granting liquor licenses for the ensuing year. The present law provides that the Board of Aldermen shall determine to whom licenses shall be granted, but limits the number which shall be issued. Undoubtedly the Board will duly consider all applications and exercise wise and impartial judgment in the performance of this duty. I am obligated by my oath of office to enforce all laws. My sense of duty and my recorded public statements obligate me to make continued and persistent efforts to prevent crime and all violations of law. I therefore feel especially pledged to do my duty in the enforcement of the laws of the commonwealth, and I see no reason why violators of the law relating to the sale of intoxicating liquors should be any exception, or that those who are legally qualified to deal in this article should not be protected, while they comply with the legal conditions of their license.

ECONOMY.

The depressed condition of general business, the curtailed productions of the manufacturers, together with the present condition of our city's finances, strongly urge upon the City Government, the desirability or rather the necessity, of adopting a wise policy of economy in the administration of our city's affairs. You should be especially particular in dealing with

the several gigantic problems presented for our consideration this year, and not adopt any slip-shod policy. The different departments have explained their present and future needs for our consideration, and some of them involve a large expenditure, which contemplate securing advantages which will be enjoyed by generations now unborn. You should make diligent and thorough investigation, and make no haste in reaching conclusions regarding these great questions, where more depends upon starting right and comprehending the end at the beginning, than upon hasty action.

While wise, sound economy is the opposite of extravagance, yet it should not hesitate to judiciously expend two dollars instead of one dollar, which in the end might save hundreds. It repairs the streets and sidewalks for one hundred dollars and prevents the accident which costs the city two thousand dollars damages. I appeal to you, therefore, to treat the municipal questions involving the expenditure of money, with the same care that you would similar questions in your personal business. Let us honestly and faithfully investigate and examine every detail of the subjects presented, and act wisely, act conscientiously, act for the best interests of our city, act as men worthy our position, as representatives worthy our constituency, act so as to merit the approval of our own conscience, and the approbation of our fellow-citizens.

CONCLUSION.

Gentlemen: I cannot too deeply impress upon you the important position you occupy. As directors of this great corporation you have accepted a sacred trust. It is no trifling matter to represent and serve this large and growing city.

Let us bring to the task industry, energy, and our best judgment, devoting to every subject requiring action, ample time, thorough investigation, and careful consideration, that our action may be in the interest of the greatest good to the largest number, ever remembering our solemn official obligations, and not forgetting that we are the servants of the people, and not the representatives of any party or faction.

Although some of us enter upon our duties with the advantage of experience gained in previous administrations, yet no city government has had the same financial conditions and burdens to contend with or the same important problems to investigate and solve. While full discussion of the various subjects presented for action is desirable and necessary, yet all our debates and discussions should be conducted in a friendly spirit for the purpose of securing harmonious action for the best interest of the city, and not to gain factional or party advantage.

I entreat you to avoid as far as possible rivalry and continued strife in the organization of each branch of the government. Loyalty to our city's interest is commendable and will meet the hearty approval of our constituents, while any degree of adherence to action in the sole interest of party will be discovered and condemned by our citizens as unworthy of our position and a dishonor to the fair fame of our city. Rather let us be loyal and faithful to the duties and trusts we have accepted and thus merit the commendations of our fellow-citizens.

1894—CITY DOCUMENT NO. 2.

CITY GOVERNMENT 1894.

MAYOR.

HON. STEPHEN A. BROWNELL.

ALDERMEN.

Ward 1—GEORGE F. BRIGHTMAN.
Ward 2—HENRY C. HATHAWAY.
Ward 3—FRANK C. BARROWS.
Ward 4—ARTHUR E. PERRY.
Ward 5—ISAAC L. ASHLEY.
Ward 6—WILLIAM H. RANKIN.

CITY CLERK.

DANIEL B. LEONARD.

ASSISTANT CITY CLERK.

WILLIAM S. COOK.

CITY TREASURER AND COLLECTOR OF TAXES.

JAMES H. HATHAWAY.

CITY AUDITOR.

GEORGE W. PARKER.

CITY MESSENGER.

AUGUSTUS D. PIPER.

COMMON COUNCIL.

PRESIDENT—JOHN H. BARROWS.

Ward One.

HENRY T. ASHLEY,
JOSEPH CHAUSSE,
MORTIMER McCARTHY,
MARTIN H. SULLIVAN.

Ward Two.

ARTHUR L. BLACKMER,
ROBERT S. LAWTON,
JAMES McFARLIN,
EDWARD G. REYNOLDS.

Ward Three.

GEORGE P. BAILEY,
JOHN H. BARROWS,
LEWIS E. MILLIKEN,
JOSEPH A. WRIGHT.

Ward Four.

CHARLES E. BROWNELL,
ALBERT M. BURNS,
HENRY C. COOK,
ELLIS L. HOWLAND.

Ward Five.

FREDERICK S. BRIGHTMAN,
HOMER W. HERVEY,
OLIVER PRESCOTT, JR.,
HARRY B. WOOD.

Ward Six.

JASON L. BALLOU,
CORNELIUS J. LEARY,
JOHN F. ROGERS,
CLARENCE R. SHERMAN.

CLERK—WILLIAM A. MACKIE.

STANDING COMMITTEES OF THE BOARD OF MAYOR AND ALDERMEN.

Police—The Mayor and Aldermen Hathaway and Perry.
Licenses—Aldermen Hathaway, Ashley, and Rankin.
Burial Grounds—Aldermen Hathaway, Brightman, and Barrows.
Enrollment—Aldermen Barrows, Brightman, and Rankin.
Soldiers' Aid—The Mayor and Aldermen Barrows and Hathaway.

JOINT STANDING COMMITTEES OF THE CITY COUNCIL.

Finance—The Mayor and Alderman Perry, the President of the Common Council, and Councilmen Chausse, Blackmer, Howland, Prescott, and Sherman.

Audit—Aldermen Ashley and Perry, Councilmen Brownell, Wright, and Leary.

City Property—Aldermen Perry and Brightman, Councilmen Sherman, Reynolds, and Sullivan.

Fuel—The Mayor and Alderman Ashley, Councilmen Hervey, Bailey, and Ballou.

Education—Aldermen Perry and Brightman, Councilmen McCarthy, Ballou, and Chausse.

Fire Department—Aldermen Rankin and Ashley, Councilmen McFarlin, Brightman, and Lawton.

Roads, Bridges, and Sewers—Aldermen Brightman and Ashley, Councilmen Prescott, Wright, and Cook.

Charities, Almshouse, and the Poor—Aldermen Barrows and Brightman, Councilmen Ashley, Burns, and Lawton.

Street Lights—Aldermen Ashley and Hathaway, Councilmen McFarlin, Reynolds, and Milliken.

Printing—Alderman Rankin, Councilmen Brightman and Wood.

Buildings in the Fire District—Aldermen Rankin and Ashley, Councilmen McCarthy, Sullivan, and Wood.

Armories and Military Property—Aldermen Rankin and Barrows, Councilmen Blackmer, Howland, and Burns.

Water Works and Water Supply—Aldermen Brightman and Perry, Councilmen Wood, Ashley, and Milliken.

Claims—Aldermen Perry and Barrows, Councilmen Brownell, Hervey, and Rogers.

Ordinances—Aldermen Perry and Hathaway, Councilmen Prescott, Sullivan, and Rogers.

STANDING COMMITTEES OF THE COMMON COUNCIL.

Elections and Returns—Councilmen Brownell, Reynolds, and Rogers.

Bills in Second Reading—Councilmen Hervey, Wright, and Leary.

Enrolled Ordinances—Councilmen Cook, Ballou, and Bailey.

ASSESSORS.

Office, Library Building, Room 6.

CHARLES D. TUELL, Chairman, 2 years.

JOHN A. RUGGLES, 3 years. * WILLIAM A. RUSSELL, 1 year.

GEORGE E. BRIGGS, elected to fill vacancy.

* Resigned March 22, 1894.

ASSISTANT ASSESSORS.

Ward 1—THOMAS BURGESS.
Ward 2—ARTHUR B. CHAPPELL.
Ward 3—HENRY C. RUSSELL.
Ward 4—MARSHALL T. MILLS.
Ward 5—WILLIAM J. ABRAMS.
Ward 6—FRANK PAUL.

BOARD OF HEALTH.

Office, 52 Pleasant Street.

WILLIAM N. SWIFT, Term expires February, 1896.
WILLIAM G. KIRSCHBAUM, Term expires February, 1896.
NATHANIEL HATHAWAY, Term expires February, 1895.

NATHANIEL HATHAWAY, Chairman.
WILLIAM N. SWIFT, City Physician and Quarantine Physician.
The City Physician is *ex officio* a member of the Board.

CLERK.

SUSIE J. SMALL.

HEALTH INSPECTOR.

WILLIAM E. MACOMBER.

INSPECTOR OF PLUMBING.

LOUIS H. RICHARDSON.

NEW BEDFORD WATER WORKS.

NEW BEDFORD WATER BOARD.

His Honor, STEPHEN A. BROWNELL, Mayor, *ex officio* President.
JOHN H. BARROWS, President of the Common Council, *ex officio*.
DAVID B. KEMPTON, Term expires June, 1895.
EDMUND WOOD, Term expires June, 1896.
HENRY HOWARD, Term expires June, 1894.

CLERK.

ROBERT C. P. COGGESHALL.

WATER REGISTRAR.

JAMES H. HATHAWAY.

Office, Room 2, Library Building.

SUPERINTENDENT.

ROBERT C. P. COGGESHALL.

Office, City Hall Building.

INSPECTOR.

CLIFFORD BAYLIES.

Office, Room 2, Library Building.

COMMISSIONERS OF SINKING FUND.

ANDREW R. PALMER, Term expires March, 1895.
MORGAN ROTCH, Term expires March, 1896.
WILLIAM H. PITMAN, Term expires March, 1897.

MORGAN ROTCH, Chairman.
JAMES H. HATHAWAY, Secretary and Treasurer.

OVERSEERS OF THE POOR.

*ALBERT H. W. CARPENTER,	Term expires May 1, 1895.
†CHARLES S. PAISLER,	Term expires May 1, 1896.
JAMES E. STANTON,	Term expires May 1, 1897.

Secretary—JAMES E. STANTON.
Assistant—ELLA F. BUCKLIN.
Supt. of Almshouse and Poor Farm—ALBERT A. CHACE.
Physician—WILLIAM G. POTTER.

*To fill vacancy caused by resignation of Orrick Smalley.
†To fill vacancy caused by resignation of Thomas H. Knowles.

FREE PUBLIC LIBRARY.

TRUSTEES.

Ex Officio. Term expires January, 1895.

STEPHEN A. BROWNELL, Mayor of the City.
JOHN H. BARROWS, President of the Common Council.
ARTHUR E. PERRY, Alderman and Chairman of the Committee of the City Council on Education.

Elected by the City Council.

ARTHUR G. GRINNELL,	Term expires April, 1895.
LEONARD B. ELLIS,	Term expires April, 1895.
ALEXANDER McL. GOODSPEED,	Term expires April, 1896.
WALTER S. ALLEN,	Term expires April, 1896.
ISAAC B. TOMPKINS, Jr.,	Term expires April, 1897.
MATTHEW C. JULIEN,	Term expires April, 1897.

PRESIDENT OF THE BOARD.

THE MAYOR.

CLERK.

WILLIAM L. R. GIFFORD.

COMMITTEES.

On the Library—Messrs. Julien, Allen, and Grinnell.
On Finance—Messrs. Allen, Tompkins, and Goodspeed.
On the Building—Messrs. Tompkins, Ellis, and Barrows.

LIBRARIAN.

ROBERT C. INGRAHAM.

ASSISTANT LIBRARIAN.

WILLIAM L. R. GIFFORD.

ASSISTANTS.

JOSEPHINE A. MERRICK, MARY E. BROWN,
SUSIE H. GAMMONS.

JANITOR.

YORICK W. AMES.

BOARD OF PUBLIC WORKS.

Office, Odd Fellows Building.

His Honor, STEPHEN A. BROWNELL, Mayor, *ex officio* Chairman.
JOHN H. BARROWS, President of the Common Council, *ex officio*.
MORGAN ROTCH, Term expires May 1, 1895.
SAVORY C. HATHAWAY, Term expires May 1, 1896.
GEORGE F. BARTLETT, Term expires May 1, 1897.
DANIEL B. LEONARD, Clerk.
ALBERT B. DRAKE, Superintendent.

PARK COMMISSIONERS.

THE MEMBERS OF THE BOARD OF PUBLIC WORKS.
WILLIAM S. COOK, Clerk.

SUPERINTENDENT OF BRIDGE, AND DRAW TENDER.

JOHN B. NICHOLSON.

CITY SOLICITOR.

THOMAS F. DESMOND.

CEMETERY BOARD.

LUTHER G. HEWINS, Jr., Term expires May 1, 1897.
J. ARTHUR TAYLOR, Term expires May 1, 1896.
PARDON A. MACOMBER, Term expires May 1, 1895.
Chairman, J. ARTHUR TAYLOR.
Secretary, PARDON A. MACOMBER.

SUPERINTENDENTS.

Oak Grove Cemetery—CHARLES F. CORNELL.
Rural Cemetery—SAMUEL F. WATERSON.

SEALER OF WEIGHTS AND MEASURES.

CHARLES H. WOOD.

INSPECTOR OF BUILDINGS.

EDMUND O'KEEFE.

SUPERINTENDENT OF CITY CLOCK.

CHARLES E. WOODWORTH.

CITY BELL RINGER.

GEORGE W. HOWLAND.

CITY LAND SURVEYOR.

WILLIAM F. WILLIAMS.

HARBOR MASTER.

HENRY F. WEST.

INSPECTOR OF PETROLEUM AND VINEGAR.

HARRISON DELANO.

Office, No. 17 Middle Street.

INSPECTOR OF MILK, PROVISIONS, AND ANIMALS INTENDED FOR SLAUGHTER.

DANIEL C. ASHLEY.

Office, No. 46 North Second Street.

SUPERVISOR OF WIRES.

DANIEL D. BRIGGS.

REGISTRARS OF VOTERS.

EMANUEL SULLAVOU, Term expires May, 1895.
WILLARD N. LANE, Term expires May, 1896.
JOHN A. GOMLEY, Term expires May, 1897.
DANIEL B. LEONARD, City Clerk, *ex officio*.

Office, Basement, City Hall Building.

PRECINCT OFFICERS.

Term of office expires Nov. 1, 1894.

WARD 1, PRECINCT 1.

Warden, WILLIAM J. ARRIGAN, D.
Clerk, EDWARD F. DAHILL, R.
Inspector, EDWARD M. MURPHY, D.
" RICHARD TOWNLEY, R.
" WILLIAM J. HOYLE, D.
" GEORGE A. POTTER, R.
" JOHN A. RUSSELL, P.

Deputies.

Warden, MAURICE C. DAHILL, D.
Clerk, CHARLES A. V. TERRY, R.
Inspector, WILLIAM E. HATHAWAY, D.
"
"
" CHARLES T. BROWNELL, R.

WARD 1, PRECINCT 2.

Warden, GEORGE P. MACOMBER, R.
Clerk, JAMES McDONNELL, D.
Inspector, GEORGE B. BORDEN, R.
" DANIEL J. SULLIVAN, D.
" GEORGE E. SAXON, R.
" DANIEL F. DRISCOLL, D.

Deputies.

Warden,
Clerk,
Inspector, JAMES H. SAXON, R.
" JOHN H. RYAN, D.
" EDWIN WHITTAKER, R.
" JOSEPH T. SMITH, D.

WARD 2, PRECINCT 3.

Warden, DAVID B. PIERCE, D.
Clerk, MYRON W. BROWNELL, R.
Inspector, HENRY FIELD, JR., D.
" STEPHEN HAFFORD, JR., R.
" WILLIAM W. ATWOOD, D.
" ARTHUR A. DEXTER, R.

Deputies.

Warden, CHARLES A. CASE, D.
Clerk, CHARLES T. BURGESS, R.
Inspector, LUCIUS J. DAMMON, D.
" CHARLES L. FAUNCE, R.
" JAMES P. FITZGERALD, D.
" JAMES H. PEASE, R.

WARD 2, PRECINCT 4.

Warden, GEORGE W. HILLMAN, R.
Clerk, J. FRANKLIN KEENE, D.
Inspector, DAVID S. SMALL, R.
" JOSEPH P. H. CLARKE, D.
" SAMUEL R. BROWNELL, R.
" ASA L. H. ALLEN, D.

Deputies.

Warden, GEORGE K. DAMMON, R.
Clerk, HENRY SMITH, D.
Inspector, PHILIP R. KING, R.
" JAMES C. McNUTT, D.
" SAMUEL E. MILLER, R.
" CHARLES L. CHURCH, D.

WARD 3, PRECINCT 5.

Warden, JOSHUA B. ASHLEY, JR., D.
Clerk, JAMES D. ALLEN, R.
Inspector, HENRY F. HAMMOND, D.
" WILLIAM T. CASWELL, R.
" GEORGE T. HADLEY, D.
" RUFUS H. WILLIS, R.

Deputies.

Warden, JAMES F. CHIPMAN, D.
Clerk, CHARLES M. COMEY, R.
Inspector, JOSHUA B. LAPHAM, D.
" PRINCE S. BORDEN, R.
" CHARLES T. LUCE, D.
" AUGUSTUS G. MOULTON, R.

WARD 3, PRECINCT 6.

Warden, ALBERT H. W. CARPENTER, D.
Clerk, B. FRANKLIN WORDELL, R.
Inspector, FRANK G. CARPENTER, D.
" THOMAS H. FORBES, R.
" EDWARD S. RUSSELL, D.
" WILLIAM E. CARROLL, R.

Deputies.

Warden,
Clerk, CHARLES L. PAINE, R.
Inspector, TIMOTHY CROWLEY, D.
"
" OBED S. COWING, D.
" GEORGE H. COOK, R.

WARD 4, PRECINCT 7.

Warden, WILLIAM F. CASWELL, D.
Clerk, WALTER R. MYRICK, D.
Inspector, AUGUSTUS D. PIPER, R.
" GEORGE R. YOUNG, D.
" MARSHALL T. MILLS, R.
" GEORGE S. HOYT, D.

Deputies.

Warden, JAMES B. RUSSELL, R.
Clerk, WILLIAM L. R. GIFFORD, D.
Inspector, FRED. D. BARROWS, R.
" FRED. A BROWNELL, D.
"
" GEORGE M. WOOD, D.

WARD 5, PRECINCT 8.

Warden, PHILIP S. BRIGGS, D.
Clerk, JOHN K. McAFEE, R.
Inspector, GEORGE P. RICHARDSON, D.
" ARTHUR C. SPOONER, R.
" ISAAC C. SHERMAN, D.
" ORRICK SMALLEY, JR., R.
" ALBERT K. WOOD, P.

Deputies.

Warden, WILLIAM H. SHERMAN, D.
Clerk ALBION T. BROWNELL, R.
Inspector, THOMAS J. PEED, D.
" "
" "
" GEORGE F. COLE, R.

WARD 5, PRECINCT 9.

Warden, HENRY S. SWAIN, R.
Clerk, HENRY A. GRAY, D.
Inspector, DAVID M. PIPER, R.
" WILLIAM C. KENNEDY, D.
" FREDERICK B. COOK, R.
" CHARLES S. BAYLIES, D.

Deputies.

Warden, FRANCIS A. BOOTH, R.
Clerk,
Inspector, JOHN C. EMERY, R.
" ARTHUR E. DUFFEY, D.
"
" CHARLES F. F. JONES, D.

WARD 6, PRECINCT 10.

Warden, CHARLES F. BRIGGS, R.
Clerk, LEANDER A. WILLISTON, D.
Inspector, GEORGE F. CURRY, R.
" FRANK CROACHER, D.
" JOHN W. CUNNINGHAM, R.
" FRANK G. TABER, D.

Deputies.

Warden,
Clerk,
Inspector, GEORGE F. SAWIN, R.
" PATRICK KENNEDY, D.
" ROLAND R. ASHLEY, R.
"

WARD 6, PRECINCT 11.

Warden, HERBERT B. GARDNER, R.
Clerk, N. HERBERT GREENE, D.
Inspector, WILLIAM W. BONNEY, R.
" WILLIAM N. NELSON, D.
" AMOS W. HADLEY, R.
" GIDEON D. POPPLE, D.
" ARTHUR S. ALLEN, P.

Deputies.

Warden, MARSHALL S. GREENE, R.
Clerk,
Inspector, WILLIAM A. GIBBS, R.
"
" ANDERSON H. SWIFT, R.
" GEORGE L. JENNINGS, D.

VOTING PRECINCTS.

WARD ONE.

Precinct 1. All that portion of said ward lying northerly of a line drawn through the centre of Cedar Grove, Purchase, Linden, Ashland and Durfee streets, thence continuing in a straight line to the boundary line between the town of Dartmouth and the city of New Bedford.

Voting place, Ward room, corner of Weld and Bowditch streets.

Precinct 2. All that portion of said ward lying southerly of the aforesaid division line.

Voting place, Howland Chapel, 588 Purchase street.

WARD TWO.

Precinct 3. All that portion of said ward lying east of a line drawn through the centre of Thomas, Sycamore, and County streets, to a point at the intersection of a line formed by the extension of a line through the centre of Franklin street.

Voting place, Ward room on Willis street.

Precinct 4. All that portion of said ward lying west of the aforesaid division line.

Voting place, carpenter shop of Loum H. Faunce, rear of 63 Parker street.

WARD THREE.

Precinct 5. All that portion of said ward lying east of a line drawn through the centre of Summer street, from the centre of Middle to the centre of Maxfield street.

Voting place, Ward room, Kempton street, near County.

Precinct 6. All that portion of said ward lying west of aforesaid division line.

Voting place, northwest corner of Hillman and Ash streets.

WARD FOUR.

Precinct 7. The entire ward, including the islands known and called Popes and Fish islands.

Voting place, City Hall.

WARD FIVE.

Precinct 8. All that portion of said ward lying easterly of a line drawn through the centre of Fifth street, from the centre of Wing street to the centre of Bedford street, thence through Bedford and South Sixth streets to the centre of Spring street.

Voting place, Ward room on Fourth street, near School.

Precinct 9. All that portion of said ward lying westerly of the aforesaid division line.

Voting place, No. 4 engine house, Bedford street.

WARD SIX.

Precinct 10. All that portion of said ward lying easterly of a line drawn through the centre of Fifth street, from its intersection with the centre of Wing street, thence through Grinnell, Fourth, and Rivet streets, Acushnet avenue, Division, and Water streets, to and along the centre of French avenue south to tide water.

Voting place, store 534 South First street.

Precinct 11. All that portion of said ward lying westerly of the aforesaid division line.

Voting place, Ward room on Sherman street.

FIRE DEPARTMENT.

CHIEF ENGINEER.

FREDERICK MACY, Term expires January, 1898.
Office, City Hall Building.

ASSISTANT ENGINEERS.

First — LORING T. PARLOW, Term expires January, 1895.
Second — JAMES J. DONAGHY, Term expires January, 1898.
Third — SAMUEL C. FRANCE, Term expires January, 1897.
Fourth — GEORGE M. CRAPO, Term expires January, 1896.

CLERK OF BOARD OF ENGINEERS.

LUTHER G. HEWINS, Jr.

MEMBERS OF THE NEW BEDFORD PROTECTING SOCIETY.

(Special Police Officers to serve at fires.)

Akin, Francis T.
Allen, George H. H.
Allen, Gideon
Allen, Gilbert
Bamford, James H.
Bamford, William
Bennett, George W.
Bentley, Lewis E.
Bourne, Standish
Bly, O. Frank
Briggs, George E.
Case, Charles A.
Coggeshall, R. C. P.
Cornish, Clifton H.
Denison, Henry C.
Dews, Edwin
Dias, Joseph
Dunham, Ernest A.
Dunham, Fred C.
Eldridge, John, Jr.
Field, Walter F.
Gardner, Edward R.
Gibbs, John E.
Gifford, Charles H.
Gifford, Frank H.
Hadley, A. W.
Hammond, Henry F.
Handy, Jonathan
Haskell, Charles M.
Holden, Charles H.
Howard, Henry
Howland, John J.
Hussey, Charles M.
Kelley, Charles S.
Kingman, G. D.
Knowles, Thomas H.
Lawton, Charles H.
Lewis, Edgar R.
Lowe, John H.
Macy, Frederick B.
Manchester, P. F.
Maxfield, Edmund F.
Nye, Willard, Jr.
Paine, Charles L.
Parker, James N.
Peirce, Stephen D.
Phillips, George A.
Pierce, Edward T.
Pierce, Otis N.
Pitman, William H.
Potter, William F.
Read, William F.
Robbins, Arthur E.
Robinson, William A.
Rotch, Morgan
Richardson, Louis H.
Sanford, Gardner T.
Sawin, Frank E.
Shaw, S. Edward
Snow, Robert
Swift, Leander H.
Swift, R. W.
Taber, Charles M.
Taylor, William T.
Thornton, Alfred
Tripp, Augustus C.
Vincent, Mark T.
Washburn, F. A.
West, William R.
Wilbor, Alfred G.
Wilde, Edmond L.
Willis, William H.
Wood, Edmund
Wood, Horace
Wood, Thomas F.

POLICE DEPARTMENT.

CHIEF.

EZEKIEL C. GARDINER.

CAPTAINS.

TIMOTHY C. ALLEN, JAMES L. WILBER.

LIEUTENANTS.

LEMUEL D. ADAMS,
SETH E. BRYANT,
THOMAS W. COMSTOCK,
THOMAS FAY,
ARTHUR H. JONES,
ELLERY PEIRCE,
THOMAS J. TAFT.

INSPECTORS.

FRANKLIN L. HATHAWAY, JOHN C. PARKER.

PATROLMEN.

ALLEN, EDGAR W.
ALLEN, EDWARD
ALMOND, WALTER
ARNETT, HENRY
ARNETT, JAMES W.
BROWNELL, MILTON H.
CALLANAN, THOMAS F.
CANNAVAN, PATRICK
CLARK, ULYSSES L.
COX, JAMES M.
DAHONEY, THOMAS
DEMERS, FRANK E.
DENEEN, DANIEL
DODDS, JAMES
DUMEC, PETER
ELDRIDGE, WASHINGTON A.
ENOS, FRANK
FOLEY, EDMUND
GENDRON, GEORGE E.
GIFFORD, CHARLES C.
GRAY, ALBERT N.
HUMPHREY, DANIEL J.
HUSSEY, FREDERICK
IVEY, JAMES A.
KENNEDY, PATRICK
LEE, ALLEN L.
MATHER, JOSEPH
McBAY, CHARLES L.
McCARTHY, JEREMIAH
McDONNELL, PATRICK
MITCHELL, JAMES
MOYNAN, ROBERT
MURPHY, CORNELIUS J.
OLIVER, JOHN F.
PAIGE, GEORGE W.
PINKHAM, GEORGE W.
RAYMOND, HIRAM E.
RHODES, HENRY W.
ROOKS, JOHN C.
ROSCOE, WILLIAM E.
ROSE, ALBERT J.
RUSSELL, EUGENE F.
SISSON, JOSEPH De L.
SMITH, ANDREW J.
SULLIVAN, TIMOTHY
SWEENEY, DANIEL P.
TABER, CHARLES H.
TABER, JEREMIAH M.
TELFORD, JOHN
UNDERWOOD, WILLIS C.
VOGEL, GEORGE
WESTON, STEPHEN J.
WILLIAMS, JOHN H.
WILSON, THOMAS H.
WING, JOSEPH B.
WIXON, JAMES A.

HEALTH OFFICER.

MACOMBER, WILLIAM E.

WAGON-MEN.

BRADY, JOHN W., JONES, JOHN M.

HOUSEKEEPERS.

BUMPUS, HENRY W.
DAYTON, LUTHER M.
KIRBY, DAVID G.
MITCHELL, WILLIAM H.
RUSSELL, ELISHA E.
STEVENS, HENRY.

SPECIAL HOUSEKEEPERS.

JONES, ISAAC M.
MANCHESTER, JOHN B.
ROBBINS, CHARLES H.

MATRON.

BULLARD, MARGARET S.

DRIVERS.

JENNINGS, EDWARD F. McENNIS, ROBERT B.

JANITOR.

DREW, MOSES C.

CLERK.

WEST, HENRY N.

CONSTABLES.

THE MEMBERS OF THE POLICE FORCE, LEWIS S. MOORE, SAMUEL C. PERRY AND THOMAS D. HOWLAND.

KEEPER OF THE LOCKUP.

EZEKIEL C. GARDINER.

PROBATION OFFICER.

ISAAC H. COE.

SPECIAL POLICE OFFICERS.

Allen, William H.
Barber, John R.
Barker, Robert T.
Bartel, Leopold
Bennett, Jeremiah H.
Bentley, Frank T.
Bliss, Frederick P.
Bliss, William H.
Booth, Benjamin T.
Borden, Prince S.
Brown, William L. G.
Buckley, Alfred R.
Burgess, Stephen
Burke, Michael I.
Burke, William
Butts, Henry R., Jr.
Butts, Squire W.
Carr, James E.
Chace, Albert A.
Childs, Cyril M.
Clark, William
Clarkson, Nicholas J.
Clynes, Thomas
Collins, John
Conklin, Abraham
Corish, John
Corley, Maurice C.
Cornell, Charles F.
Cornell, Sidney I.
Crafts, James
Cronin, Cornelius
Dammon, George K.
Davis, Otis A.
Delano, Harrison
Devine, Patrick
Devoll, George H.
Donaghy, Joseph
Duckworth, William A.
Duffy, Thomas
Durfey, Richard T.
Eldredge, Samuel T.
Engeland, George
Etchell, Edward
Ferguson, William
Finn, Michael
Fitzgerald, James
Flavin, Maurice F.
Francis, Frank W.
Fuller, Jonathan A.
Geddis, Henry S.
Gibbs, Preston H.
Gibbs, William H. H.
Gifford, John
Glennon, Thomas F.
Grant, Lafayette
Greene, Marshall S.
Harrington, J., Clark st.
Hillman, George W.
Hines, Henry S.
Holden, George
Holloway, James T.
Holmes, Ezra
Holmes, John J.

Howard, Henry
Howland, Joseph B.
Howland, William G.
Jay, James A.
Jenney, Ezra T.
Johnson, Oscar
Johnson, W. H., Smith street.
Jones, Isaac M.
Jordan, William
Joseph, John
Karcher, Frederick, Sr.
Kelley, Hiram C.
Kennedy, Thomas
Kent, James D. T.
King, Joseph T.
Lapham, George W.
Law, Peter G.
Lawrence, Cyrus T.
Leary, Dennis, Jr.
Lincoln, Ellery C.
Lincoln, John
Little, Frank
Little, John E.
Lumbert, John
Luther, Joseph P.
McCullough, Robert
McDermot, Michael
Macomber, H. M.
Marr, William J.
Martin, Henry T.
Mehan, John
Miller, George
Miskell, John
Morgan, Elias T.
Morrison, Thomas
Netcher, George F.
Nicholson, John B.
Oliver, John
Omey, Joseph C.
Palmer, Robert
Parker, Charles W.
Partington, William
Peckham, Samuel W.
Peed, Thomas J.
Peirce, Anthony, Jr.
Perry, Samuel C.
Phillips, Henry T.
Pierce, Thomas H.
Pinelle, Joseph
Piper, Augustus D.
Place, William J.
Pollock, John H.
Quinn, Joseph
Read, George P.
Read, Richard A.
Remington, John G.
Reynolds, James R.
Richie, David
Robbins, Charles H.
Russell, James B.
Sadler, William G.
Salmon, John
Saxon, James H.
Shea, Michael J.
Shields, Charles M.
Small, David S.
Smith, Henry
Smith, Henry H.
Spicer, Robert H.
Spooner, Joseph W.
Staples, Elias
Stephens, Michael
Stopford, James I.
Taber, Christopher C.
Taft, Daniel F.
Tallman, Edward S.
Taylor, Theodore
Taylor, William A.
Thomas, Edward, Jr.
Thompson, Thomas
Thompson, John H.
Tinkham, John S.
Tinkham, Otis
Townley, Richard
Tripp, Benjamin E.
Tripp, Holder R.
Tripp, LeRoy G.
Tuell, Charles D.
Underwood, John A.
Warfield, James H.
Watts, William H. C.
Weeden, Charles H. L.
Wilbur, Allen R.
Wiley, James
Willis, Rufus H.
Williston, Hiram L.
Wilson, John
Wood, Charles N.
Wood, James A.

MEASURERS OF WOOD AND BARK.

Allen, Joseph H.
Allen, Abram A.
Ashley, Roland R.
Bennett, William H.
Chace, Charles S.
Chace, Ira M.
Cobb, George A.
Coffin, Stephen P.
Coxen, Charles H.
Crussell, John W.
Dillingham, Abram L.
Gibbs, John E.
Grinnell, A. B., Jr.
Gurney, William A.
Hall, George N.
Lawrence, James A.
Leavitt, Clark
Morse, Charles M., Jr.
Notter, John
Pickens, George
Reed, Benjamin H.
Rodman, Frank P.
Rounsevell, Walter S.
Smith, John
Taber, Edward C.
Tripp, Augustus C.

SURVEYORS OF LUMBER.

Beetle, John H.
Carpenter, George H.
Chase, Abram
Graham, Robert P.
Hayes, Lemuel W.
Randall, Charles G.
Randall, George A.
Smith, Charles F.

MEASURERS OF GRAIN.

Bentley, Edwin R.
Chace, Ira M.
Hall, George N.
Rodman, Frank P.

WEIGHERS OF COAL.

Bowman, Fred G.
Brooks, Nathan B.
Buchanan, James
Chace, Ira M.
Comey, Charles M.
Corson, Frank E.
Corson, James A.
Day, Thomas E.
Gifford, Nathaniel W.
Hall, George N.
Hathaway, Benj. F., Jr.
Hunt, Josiah
Lindsey, Robert
Lowden, Benjamin B.
Percy, T. A.
Pierce, Edward E.
Reed, Edmund A.
Rodman, Frank P.
Rounsevell, Walter S.
Smith, John
Thomas, Albert E.
Tripp, Jabez D.
Wilson, Wallace B.
Wordell, Wilson I.

CITY WEIGHERS.

Ashley, Clara M.
Ashley, Moses E. H.
Ashley, Roland R.
Bearse, Albert C.
Blanchard, C. S.
Brooks, Nathan B.
Brownell, Charles H.
Buchanan, James
Burgess, Thomas
Butts, James D.
Carey, Bernard
Chace, Ira M.
Chace, Albert A.
Comey, Charles M.
Corson, Frank E.
Corson, James A.
Craft, James
Day, Thomas E.
Delano, Harrison
Doane, Edward D.
Driscoll, Daniel E.
Drysdale, Robert M.
Duffield, William C.
Dyer, Edward C.
Edwards, Charles F.
Field, Edward H.
Gibbs, J. Edward, Jr.
Gibbs, William H. H.
Gifford, Nathaniel W.
Gifford, Richmond A.
Gifford, Robert B.
Gilbert, Peter
Gile, J. F.
Gilston, John W.
Grant, Lafayette
Gurney, William A.
Hassett, James
Hathaway, B. F., Jr.
Hayden, Edward D.
Hill, John
Hitch, Frank B.
Howard, Henry
Howland, Beriah G.
Hunt, Josiah
Jenney, Ezra T.
Jennings, Charles E.
Jennings, George L.
Jennings, John
Jewett, Charles A.
Johnson, Ferdinand A.
Kenney, Edward D.
Kidd, George H.
Knowles, Edward O.
Lamontague, Frank
Lawton, Robert S.
Lawton, W. F.
Lee, John A.

Lindsey, Robert
Lynch, Simon F.
Lyons, John
Macomber, Harry T.
Mason, Frederick A.
McCarthy, Mortimer
Mulberry, William H.
Nowell, Joseph C.
O'Connor, Cornelius
Patnaude, Joseph
Paul, George H.
Pedro, George E.
Peirce, Edward E.
Perry, Frank T.
Potter, Edwin L.
Potter, J. A.
Quinn, J. T.
Reed, Benjamin H.
Reed, Edmund A.
Rodman, Frank P.
Roscow, Herbert
Rose, Frank E.
Rounsvell, Walter S.
Sherman, David W., Jr.
Shirley, Percy E. S.
Sisson, Frank E.
Swift, Reuben E.
Taber, Edward C.
Thomas, Albert E.
Tilton, Herbert E.
Tripp, Augustus C.
Tripp, Jabez D.
Tripp, John E.
Tripp, Joseph J.
Wilcox, Frank S.
Willis, Charles L.
Wilson, Wallace B.
Wood, John
Wordell, Wilson I.
York, Joseph
Young, Fred M.

WEIGHERS OF BOILERS AND HEAVY MACHINERY.

Howard, Henry
Hathaway, Benj. F., Jr.
Sisson, William H. H.
Smith, John
Stone, Walter A.

FENCE VIEWERS.

Cobb, George A.
Pierce, Crawford S.
Williston, Leander A.

POUND KEEPERS.

Dayton, Luther M.
Kirby, David G.
Manchester, John B.
Russell, Elisha E.
Stevens, Henry

FIELD DRIVERS.

The Police, William H. Johnson, (Smith street), John B. Manchester, Henry Stevens.

1893—CITY DOCUMENT NO. 3.

CITY OF NEW BEDFORD, MASS.

TWENTY-FOURTH ANNUAL REPORT

OF THE

NEW BEDFORD WATER BOARD,

TO THE

CITY COUNCIL,

CONTAINING:

I.

The Report of the New Bedford Water Board for the Year 1893.

II.

The Report of the Water Registrar.

III.

The Report of the Superintendent.

DECEMBER 28, 1893.

NEW BEDFORD:
EVENING JOURNAL COMPANY, PRINTERS TO THE CITY.
1894.

New Bedford Water Board.

1894.

STEPHEN A. BROWNELL,

Mayor of the City.

JOHN A. BARROWS,

President of the Common Council.

HENRY HOWARD.

DAVID B. KEMPTON.

EDMUND WOOD.

CLERK OF THE BOARD, AND SUPERINTENDENT.

ROBERT C. P. COGGESHALL.

WATER REGISTRAR.

JAMES H. HATHAWAY.

PUMPING STATION.

ADONIRAM S. NEGUS, *Pumping Engineer.*

INSPECTORS.

CLIFFORD BAYLIES,

ARTHUR R. WEEKS.

REPORT.

City of New Bedford,
Office of the New Bedford Water Board,
December 28, 1893.

To the City Council of the City of New Bedford:

Gentlemen,—The New Bedford Water Board herewith respectfully presents its twenty-fourth annual report.

On June 23d, William N. Church declined to be again a candidate for re-election as a member of this Board, and consequently terminated a continuous service of twelve years. We feel like giving expression here to the marked fidelity, conscienciousness and ability with which he has performed the duties of the office. Our city has had the advantage of his good judgment, and with his retirement it loses a faithful officer.

On the 23d of June, Edmund Wood was elected a member of the Board for three years.

The following abstract is drawn from the report of James H. Hathaway, City Treasurer and Water Registrar:

Balance Dec. 1, 1892,	$49,944.56
Receipts for the year, all sources,	100,187.34
	$150,131.90

The charges have been as follows:

Expenditures for management and repairs,	$41,722.84
Expenditures for extensions,	64,905.85
	$106,628.69
Which leaves a balance to the credit of the works on the books of the City Treasurer, Dec. 1, 1893,	$43,502.21

The following is a brief statement regarding the financial operations of the past year:

DEBITS.

Balance Dec. 1, 1892,		$49,944.56
Receipts from water rates,		80,877.61
Receipts from rents, sales, etc.,		139.55
Receipts from laying main and service pipes in private property, including fines,		7,170.18
Receipts from public funds:		
General appropriation from management and repair account to water debt,	$10,600.00	
General appropriation for use of water for public purposes,	12,000.00	
General appropriation by tax levy to make up deficit,	36,600.00	59,200.00
		$197,331.90

CREDITS.

Management and repairs, less bonds and sinking funds,	$31,122.84	
Extension of works,	64,905.85	
Interest on bonds,	37,200.00	
Bonds paid,	20,000.00	
Sinking funds,	600.00	
Balance Dec. 1, 1893,	43,503.21	$197,331.90
The actual outlay for the construction of these works, Dec. 1, 1893, exclusive of debt, interest, and management and repair account, is		$1,590,121.77

The amount which this department falls short of being self-supporting is thus seen to be $36,600. This deficit as usual has been made up in the general tax levy.

Sixty-one petitions have been received for extension of main pipe; of this number 59 have been granted.

Twenty-nine thousand one hundred thirty-nine feet of main distribution pipe has been laid, and 10,114 feet of that previously laid has been removed, making a total of $72\frac{23\,43}{10\,000}$ miles now in use.

The number of service pipes has been increased 400: total number now in use 7531.

A contract was made on January 31st with the Walworth Manufacturing Company of Boston for a supply of screw taps, sidewalk stops and other brass castings. The consideration ranged in accordance with the size, from 50 cents to $1.05 for taps, 40 cents to 83 cents for sidewalk stops, and 18 cents per pound for stop box fittings.

A contract was concluded with the Fairhaven Iron Foundry Company on January 30th for a line of special castings. The consideration was 3 1-2 cents per pound for service stop boxes and covers, and 2 1-2 cents per pound for branches, gate boxes and other castings.

A contract was made on July 27th by the fuel committee of the City Council with Messrs. Garfield & Proctor for a supply of 1200 gross tons of Georges Creek Cumberland coal, this to be delivered at the pumping station for the sum of $4.23 per gross ton.

A contract was made on December 12th with R. D. Wood & Co. of Philadelphia for 300 gross tons of straight cast-iron pipe, the same to be delivered in the city by April 15th. Consideration was $22.20 per gross ton.

Your attention has been frequently called in previous reports to the very rapid yearly increase in the consumption of water, and in consequence thereof the absolute necessity of measures soon being taken to secure an addition to our present source of supply.

Early this year we were strongly convinced that the time for such action had arrived, and at a meeting of the Board held May 5th it was voted to send a communication to you recommending an early movement on your part.

By an order passed by you on May 10th this Board was instructed to "proceed at once with the work of securing all necessary options to purchase and procure property surveys

and plans for the purpose of providing for an increase in the water supply of the city of New Bedford."

On November 23d you received from us a partial report covering such work as had then been accomplished. Constituting a part of that document was the report of a preliminary study which had been made by Messrs. George S. Rice and George E. Evans, civil and hydraulic engineers, whose opinions, from their large experience with such problems, have the confidence of the Board.

By an order passed by you on November 23d the Board was instructed "to prepare and present to the City Council the draft of a petition to the Legislature for securing the necessary authority to obtain an additional water supply for the city of New Bedford."

This document will soon be presented to you, in order that steps may be taken early in the year towards securing action thereon in the coming term of the Legislature.

This important department of our city has felt in common with the other departments the rapid growth both in population and area.

The calls for new water service have been constant during the year, and in many cases have necessitated the laying of long reaches of pipe through undeveloped and thinly settled territory. The receipts for water have not consequently increased in anything like the same ratio.

The total consumption of water has of course been greater than in any previous year, but you will notice, what is of more interest, that the average number of gallons per tap consumed every 24 hours is steadily increasing.

According to the statistics compiled by the New England Water Works Association, New Bedford stands third, only Boston and Holyoke (both gravity works) exceeding us in the amount of water consumed per tap; while no city or town in the Commonwealth can exceed us in the amount of water consumed per inhabitant.

This fact certainly points emphatically to a more general use of meters. To place a meter upon every service and to have a graduated scale of charges according to the consumption is generally conceded to be the only equitable way of supplying water.

But this remedy to check a growing waste in the use of water is made unavailable by reason of the low manufacturing rate now charged for metered water. In fixing a low rate for metered water to encourage manufacturing, i. e., charging only about one-third of the absolute cost to the city, it becomes more difficult to prevent the lavish running to waste of water through gross carelessness and very imperfect fixtures.

While we do not care now as an executive board to agitate the general question of high or low water rates, we do believe that there are other advantages besides the financial ones in fixing the charge for metered water at a figure somewhat nearer the cost of supplying it.

Not only has New Bedford the lowest manufacturing rate in the Commonwealth, but there is no city but charges at least five times as much as we do, and the average price is seven times that now charged in this city.

We estimate the amount of water used for manufacturing purposes in the city to be at least one-third of the total consumption, while the receipts for these purposes are only one-ninth.

The reports of the Superintendent and Water Registrar are presented with this report and constitute a part of this document.

Respectfully submitted,

J. C. BROCK, President,
SAMUEL C. HART,
HENRY HOWARD,
DAVID B. KEMPTON,
EDMUND WOOD,
New Bedford Water Board.

Report of the Water Registrar.

City of New Bedford,
Water Registrar's Office,
December 1, 1893.

To the New Bedford Water Board:

Gentlemen,—I herewith present to you the annual statements of my accounts as Water Registrar for the year ending at this date.

The accounts are arranged in the following order, viz.:

1. The receipts for the year from all sources.

2. A classified statement of expenditures for the year.

3. A recapitulation of the outlay for the year, showing the net expenditures under each head.

4. A general recapitulation of the outlay from the commencement of the works to this date.

5. The source of income applied to construction account.

6. Water debt, and payments made on account of the same.

CREDITS TO THE NEW BEDFORD WATER WORKS.

Balance, Dec. 1, 1892,			$49,944.56
Receipts for water:			
Rates, domestic,	$72,681.88		
Rates, manufacturing,	8,195.73		
Appropriations,	12,000.00	$92,877.61	
Receipts for services:			
Services,	$4,173.38		
Meters,	486.75		
Fines,	60.00	4,720.13	
Received for mains:			
Pipe sold,	$15.97		
Rebate on valves,	123.48		
Mill piping,	2,177.52		
Salt water conduit,	133.08	2,450.05	
Received from other sources:			
Sale of hay,	$86.10		
Sale of boilers,	28.45		
Rents,	25.00	139.55	100,187.34
			$150,131.90
Expenditures for the year ending Dec. 1, 1893,			106,628.69
Balance cash in the treasury, Dec. 1, 1893,			$43,503.21

EXPENDITURES FOR 1893.

MANAGEMENT AND REPAIRS.

Engineering and superintendence,	$4,680.84	
Water Registrar, inspectors, and clerk hire,	3,762.24	$8,443.08
Pumping expenses:		
Engineers, firemen, and watchmen,	$5,858.48	
Fuel for pumping engines,	5,148.06	
Oil, waste, packing, and gas,	607.07	
Other supplies,	317.35	
Repairs of engines,	366.97	
Repairs of boilers,	24.00	
Repairs of feed water heater, boilers 5 and 6,	748.00	
Incidentals,	146.92	

Incidentals, boiler insurance,	250.00	$13,466.85	
Maintenance engine house and lot,		476.34	
Maintenance engine house, painting engine room,		339.39	
Maintenance of mains.		1,195.81	
Services:			
Labor and stock,	$187.31		
New stop boxes, clearing taps, etc.,	389.93		
Plumbing,	384.50	961.74	
Fountains and meters,		269.61	
Water street workshop and pipe yard,		959.03	
Receiving and distributing reservoir and standpipe,		645.87	
Storing reservoir, dam and conduit,		544.95	
Incidentals,		3,765.38	
Repairs of house at storing reservoir,		54.79	
Permanent debt.		10,000.00	
Sinking funds,		600.00	$41,722.84

EXTENSIONS.

Mains:			
Main pipe and special castings,	$20,656.54		
Labor laying mains,	9,986.74		
Lead, carting and blacksmith work,	4,153.22		
Other supplies,	1,838.75		
Stop gates, hydrants, etc.,	2,899.28		
Unloading pipe and wharfage,	298.13	39,832.66	
Services:			
Service pipe, lead and iron,	$2,449.97		
Taps, stop boxes, and other supplies,	1,484.28		
Labor laying services,	1,852.38		
Plumbing,	380.00	6,166.63	
Mill Piping.		291.49	
Fountains and meters,		2,137.19	
New boilers,		2,797.79	
New flue and steam pipe,		9.61	
New tower, engine house,		252.82	
Electric light plant, pumping station,		1,336.40	
Meteorological instruments,		857.06	
Enlarging Little Quittacas connection,		7,097.52	
Preliminary work, additional supply,		3,400.00	
Feed water heater, engine No. 3,		370.63	
Trial of boiler,		356.05	64,905.85
Total expenditures for the year,			$106,628.69

NET EXPENDITURES UNDER EACH HEAD.

MANAGEMENT AND REPAIRS.

Outlay as above stated,			$41,722.84
Deduct from this account:			
Public debt,		$10,000.00	
Sinking funds		600.00	
Sale of hay,		86.10	
Sale of boilers,		28.45	
Rents,		25.00	
Fines,		60.00	10,799.55
			$30,923.29

EXTENSIONS.

Pipe, labor, and expense laying mains,		$39,832.66	
Pipe sold,	$15.97		
Rebate on valves,	123.48		
Mill piping,	2,177.52		
Salt water conduit,	133.08	2,450.05	
		$37,382.61	
Services, hydrants, fountains, etc.:			
Services as above,	$6,166.63		
Mill piping,	291.49		
Fountains and meters,	2,137.19		
New boilers,	2,797.79		
New flue and steam pipe,	9.61		
New tower, engine house,	252.82		
Electric light plant, pumping station,	1,336.40		
Meteorological instruments,	857.06		
Enlarging Little Quittacas connection,	7,097.52		
Preliminary work, additional supply,	3,400.00		
Feed water heater, engine No. 3,	370.63		
Trial of boiler,	356.05		
	$25,073.19		
Deductions:			
From takers, meters sold, etc.,	$4,660.13	$20,413.06	
Debt account:			
Bonds paid,	$10,000.00		
Sinking funds,	600.00	10,600.00	$68,395.67
Net expenditures for 1893,			$99,318.96

CONDENSED STATEMENT.

DEBITS.

Net expenditures for the year,	$99,318.96	
Balance unexpended,	43,503.21	$142,822.17

CREDITS.

Balance, Dec. 1, 1892,	$49,944.56	
Received for water,	92,877.61	$142,822.17

SUMMARY STATEMENT.

The whole outlay upon the works to this date has been as follows:

Conduit,	$212,307.89
Dam,	18,845.24
Distributing reservoir,	73,740.62
Distribution,	844,685.15
Engine house and lot,	102,694.07
Engines and foundations,	89,889.90
Storing reservoir,	53,496.06
Receiving reservoir,	33,360.27
Pump well and culvert,	16,561.41
White homestead,	4,000.00
Peckham road,	512.00
Preliminary,	2,605.34
Preliminary, additional supply,	3,400.00
Engineering,	23,511.88
Salaries,	9,225.00
Incidentals,	8,124.05
Management and repairs,	483,243.02
Fountains, hydrants, meters, etc.,	30,165.21
Real estate, workshop and land,	6,498.75
Land, State street,	350.00
New force main,	32,309.19
Inspection,	5,570.39
Connection with Little Quittacas,	10,677.65
Expense new boilers,	835.57
New flue and steam pipe,	4,831.55
Addition to pumping station,	1,924.58
Payment of interest on debt,	53,788.14

Water bonds paid, 6 per cent.,	65,000.00
Sinking funds,	3,600.00
	$2,195,752.93
Balance, Dec. 1, 1893,	43,503.21
	$2,239,256.14

The receipts from the commencement of the works to this date have been as follows, viz.:

Appropriations by the City Council,		$1,038,000.00
Received for water and other sources,		1,201,256.14
		$2,239,256.14
Deduct the sum above stated,		2,195,752.93
Balance, Dec. 1, 1893,		$43,503.21
Outlay per general summary,		2,195,752.93
Deduct from outlay:		
Paid for management and repairs,	$483,243.02	
Interest paid,	53,788.14	
Bonds paid,	65,000.00	
Sinking funds,	3,600.00	605,631.16
Actual cost of works,		$1,590,121.77
Total receipts for water,		1,201,256.14
Deduct from this amount:		
Amount paid for maintenance, debt, interest, and sinking funds,		605,631.16
Water receipts applied to construction,		$595,624.98
Receipts for water in 1893,		92,877.61
Receipts for water in 1892,		83,872.55
Increase for 1893,		$9,005.06

The funds for the construction of the works have been derived from the following sources, viz.:

Investment of Sylvia Ann Howland educational bequest,	$100,000.00
Sylvia Ann Howland water bequest,	100,000.00
Received from sale of bonds,	815,000.00
Net receipts applied to construction,	595,624.98
Appropriation for construction in 1885,	23,000.00
Total,	$1,633,624.98
Deduct balance, Dec. 1, 1893,	43,503.21
Cost of works as stated above,	$1,590,121.77

The water debt at this date is as follows, viz.:

Water bonds, 7 per cent.,	$100,000.00
" " 6 " "	220,000.00
" " 5 " "	100,000.00
" " 4 " "	120,000.00
Sylvia Ann Howland bequest, 6 per cent.,	100,000.00
	$640,000.00
Less sinking funds,	4,118.50
Net water debt, Dec. 1, 1893,	$635,881.50

The appropriations by the City Council in 1893, for bonds and interest were as follows, viz.:

Water bonds, 6s,	$10,000.00
Interest on water loan,	37,200.00
	$47,200.00
Net expenditures by the Water Board,	99,318.96
Actual amount expended in 1893,	$146,518.96

Number of services added during the year,	397
Number of persons using water, Dec. 1, 1892,	41,776
Since added (estimated),	2,382
Total, 1893,	44,158

This includes those using water in dwellings only.

Under Chapter 17, section 12, of the City Ordinances, $10,000.00 of the receipts from takers was applied to the payment of bonds that fell due on the first of October last, and $600.00 from the same source paid to the sinking fund account.

I would most respectfully recommend that $20,000.00 be applied in 1893 to the payment of bonds that will fall due Oct. 1, next.

The inspector reports 1354 services turned off and on, largely for repairs, a small number, 30 only, having been turned off for non-payment of water rates; practicably all rates due to July 1, 1893, are paid.

Respectfully submitted,

JAMES H. HATHAWAY,

Water Registrar.

Report of the Superintendent.

NEW BEDFORD WATER WORKS,

SUPERINTENDENT'S OFFICE,

December 1, 1893.

To the New Bedford Water Board:

GENTLEMEN,—The superintendent respectfully presents his twenty-fourth annual report for the year ending December 1, 1893.

The State Board of Health have continued a monthly examination of the Acushnet water, and the following table showing the results of their analysis is kindly supplied by F. P. Stearns, Esq., Chief Engineer of that body:

Water Analysis—State Board of Health.

PARTS IN 100,000.

Number.	Date of Collection.	Date of Examination.	Appearance. Turbidity.	Appearance. Sediment.	Appearance. Color.	Odor. Cold.	Odor. Hot.	Residue on Evaporation. Total.	Residue on Evaporation. Loss on Ignition.	Residue on Evaporation. Fixed.	Ammonia. Free.	Ammonia. Albuminoid. Total.	Ammonia. Albuminoid. In Solution.	Ammonia. Albuminoid. In Suspension.	Chlorine.	Nitrogen as Nitrates.	Nitrogen as Nitrites.	Hardness.	Iron.	Oxygen Consumed.
	1893																			
9950	Jan. 30	Jan. 30	None.	Very slight.	1.6	Decidedly vegetable sweetish.	Decidedly vegetable pungent.	6.80	3.00	3.80	.0058	.0286	.0236	.0050	.62	.0070	.0001	1.8	.0300	1.4965
10063	Mar. 1	Mar. 2	Very slight.	Slight.	1.25	Decidedly vegetable sweetish.	Distinctly vegetable.	4.80	2.30	2.50	.0008	.0184	.0160	.0024	.48	.0070	.0001	1.7	.0200	1.1268
10185	Mar. 29	Mar. 30	Very slight.	Slight.	1.30	Distinctly vegetable.	Faintly vegetable.	4.25	2.30	1.95	.0004	.0146	.0130	.0016	.38	.0150	.0001	0.8	.0250	.8468
10438	May 23	May 24	Very slight.	Considerable reddish brown.	2.10	Distinctly vegetable sweetish.	Decidedly vegetable sweetish.	4.65	2.15	2.50	.0012	.0236	.0224	.0012	.37	.0030	.0000	0.3	.0075	1.3237
10563	June 26	June 27	Very slight.	Slightly rusty.	1.80	Distinctly vegetable.	Distinctly vegetable sweetish.	4.55	2.00	2.55	.0012	.0232	.0200	.0032	.48	.0070	.0001	0.6	.0300	1.2442
10696	July 25	July 26	Very slight.	Slight.	2.00	V'ry faintly vegetable.	Faintly vegetable.	4.85	2.60	2.25	.0020	.0268	.0226	.0042	.49	.0030	.0002	0.9	.0285	1.0700
10896	Aug. 28	Aug. 29	Very slight.	Considerable reddish brown.	1.30	V'ry faintly vegetable.	Distinctly vegetable sweetish.	3.95	1.70	2.25	.0004	.0170			.49	.0000	.0002	0.3	.0240	1.0428
11115	Sept. 28	Sept. 29	Very slight.	Slight.	0.85	V'ry faintly vegetable.	Faintly vegetable sweetish.	4.15	1.90	2.25	.0000	.0254	.0180	.0074	.50	.0030	.0000	1.3	.0110	.6776
11235	Oct. 23	Oct. 24	Very slight.	Slight.	0.75	Decidedly vegetable and grassy.	Faintly vegetable.	6.65	3.35	3.30	.0000	.0220	.0184	.0036	.54	.0030	.0001	0.6	.0170	.5548
11393	Nov. 27	Nov. 28	Very slight.	Very slight.	0.90	Faintly vegetable and grassy.	Distinctly vegetable sweetish.	4.95	1.85	3.10	.0088	.0216	.0166	.0050	.61	.0030	.0002	1.6	.0325	1.0277
11505	Dec. 17	Dec. 19	Very slight.	Slight.	1.00	Distinctly vegetable and grassy.	Distinctly vegetable sweetish.	6.00	2.80	3.20	.0040	.0196	.0180	.0016	.67	.0050	.0001	1.4	.0200	1.0732

The samples were collected from the conduit at the entrance to the receiving reservoir.

Scale of colors: 0=Colorless.
1=Yellowish brown tint.
2=Deep yellowish brown tint.

The draft upon the storing reservoir has far exceeded that of any previous year.

This reservoir remained practically full until the middle of July, and the lowest level to which it settled during the year was on October 24th, 27 inches. At this date it is 23 inches below high water and gradually filling.

The connection between Little Quittacas pond and the storing reservoir was closed on December 19th of last year. This year it was opened on July 23d and ran continuously to August 25th. From this date to October 2d it was allowed to flow less than half the time each day.

Last year the storing reservoir settled 43 inches, and it was evident that the connection by which the auxiliary supply is obtained from Little Quittacas pond would have to be enlarged if the storing reservoir was to be maintained nearer its flowage line throughout the entire season. It is important that this reservoir should be kept full, as this enables the delivery of the largest possible amount of water through the conduit leading to the city.

I was accordingly instructed by you early in the year to place this connection in such condition that the increased amount of water needed could be drawn from Little Quittacas pond.

This has been done from its intersection with Squinn's brook, northerly, about 7,500 feet.

Of this distance the last 4,500 feet was of such a nature that in excavating to the grade it was found necessary to secure the sides with two-inch spruce plank, well braced. A flume is thus formed about six feet in width. This has been an expensive operation, as the largest portion of this work has been in deep cuts with a very treacherous bottom, difficult to excavate, and the progress has necessarily been very slow.

There has been used up to this date 97,000 feet of plank and timber.

The bridges at the North Rochester and Dr. Braley roads have been lowered to meet the requirements of the grade of the flume at those points.

There remains about 1,400 feet of trenching to be done to reach Little Quittacas pond. This is easy compared to the work already done, and will require the services of only a few men for a short time in the early spring.

The flume as now constructed, although of temporary character, will keep in good condition for several years and until an additional supply is secured.

The cost of this work to this date has been as follows:

Labor,	$4,411.71	
Tools and supplies,	234.68	
Lumber,	2,024.30	
Provision and supplies,	303.63	
Carting,	80.00	
Railroad fares,	43.20	$7,097.52

The walls of both engine rooms at the Pumping Station have been repainted, and a storm covering has been placed over the basement steps on the west side of engine room No. 3.

The following is a complete list of the meteorological instruments which are now installed at the Pumping Station:

1 Draper self-registering barometer.
1 Draper self-registering anemometer.
1 Draper self-registering anemoscope.
1 Draper self-registering thermometer.
1 Greene standard thermometer.
1 Greene standard hygrometer.
1 Greene maximum thermometer.
1 Greene minimum thermometer.
2 Standard rain gauges.

The cost of these instruments and the placing of the same has been $857.

Three observations are made each day, viz.: at 7 A. M., 2 and 9 P. M., and other observations are made as may be required,

such as the beginning and end of storms, etc. These observations are recorded upon blanks prepared for the purpose, and a valuable record is thus being secured.

The recorded observations were commenced on October 1st. The Pumping Station is now lighted by the Edison system. An Edison dynamo with an Ideal engine is located in the tower, and the building has been wired and lamps placed at convenient locations. The wires have also been extended to the gate house of the Mount Pleasant reservoir and lamps placed therein. This plant was placed in commission on November 1st. The total cost has been as follows:

Dynamo,	$394.00	
Engine,	403.42	
Foundations, steam piping, carpenter work,	163.55	
Wiring, lamps, etc.,	359.31	
Express, freight, carting,	16.12	$1,336.40

The following statement shows the total cost of the new work inside of the boiler room, which has been in progress for over two years, and was completed early this year:

Flue to connect with new chimney,	$1,510.14	
Steam piping, valves, etc.,	3,332.51	
Removing old boilers,	214.89	
Foundation new boiler,	201.69	
New boiler,	11,566.18	
	$16,825.41	
Credit, by sale of old iron,	132.40	$16,693.01

The boiler plant is in excellent condition. It was found necessary to renew the feed water heater connected with boilers 5 and 6. The heater now in use is comprised of coils of 1 1-2 inch copper pipe. The cost was $748.

The feed pipe connected with the new Belpaire boiler receives its supply from the mains at the west of the basement of the old engine room. The water, while still at its normal temperature, passes through a 1 1-2 inch meter, thence to

a heater located in the hot well of engine No. 3. This heater is composed of coils of one-inch copper pipe and is about 225 feet in length. Its cost has been $370.63. During the passage of the feed supply through this heater its temperature is raised to about 130° F. It then passes to the heater located in the smoke box of the boiler, where its temperature is further increased to 170° F. It then enters the boiler.

In order to record the efficiency of the new Belpaire boiler, trials were made in May last by Mr. F. W. Dean, its designer, and his report is herewith presented:

OFFICE OF F. W. DEAN, MECHANICAL ENGINEER,
EXCHANGE BUILDING, 53 STATE STREET,
BOSTON, Mass., June 1, 1893.

R. C. P. Coggeshall, Superintendent New Bedford Water Works, New Bedford, Mass.:

DEAR SIR, — The 82-inch Belpaire locomotive type boiler placed in your pumping station in 1892 was designed by the writer to provide for the present needs of the water works, and also for a new pumping engine, and therefore the amount of grate and heating surface are not necessarily correct for the present needs. At present the boiler is used mostly in driving the 5,000,000 gallon Worthington high duty engine, but at times it drives the Worthington 3,000,000 gallon low duty engine in addition. Some preliminary tests were made by me on April 24th, 25th and 26th, for the purpose of adjusting the grate surface of the boiler to its present duty, and it was found that when running the high duty engine the grate was so large that the damper in the smoke flue was closed much of the time, causing sluggish combustion. When running both engines it was better. Even under the unfavorable conditions of driving one engine, the evaporation per pound of combustible from and at 212° was 12.10 pounds of water, an amount that is seldom reached. At this time the combustion was at the rate of

6 1-3 pounds of coal per square foot of grate per hour. It was thought best to reduce the grate by bricking up the sides of the furnaces and reducing the grate surface from 45 square feet to 30 1-2 square feet. After this, tests were made when running the high duty engine and when running both engines, with the results tabulated herewith. With the reduced grate the rate of combustion was 8.85 pounds of coal when driving one engine, and 16.06 pounds of coal when driving both. On the second test the boiler was driven fairly hard, evaporating three pounds of water per square foot of heating surface per hour, from and at 212°. It will be seen that notwithstanding this the performance was better than on the first day. On each day the evaporation surpassed that in any boiler of which the writer has knowledge, and the efficiency, either with or without the flue feed water heater, was greater than any of which he has a record.

The coal was Georges Creek Cumberland, of good quality, but rather wet. The high efficiency of boiler, however, shows that the high evaporation was not due to the quality of the coal alone, but to making the most of the heat developed.

The following are the principal dimensions of the boiler:

Inside diameter of shell,	82 inches.
Length of boiler over all,	31 feet.
Outside width of fire box,	8 feet 8½ inches.
Height of top of boiler above floor,	10 feet 11 inches.
Length of each grate,	6 feet.
Width of each grate when tested,	2 feet 6½ inches.
Combined width of both grates,	5 feet 1 inch.
Length of each furnace,	10 feet 7½ inches.
Length of combustion chamber,	3 feet 6 inches.
Number of tubes,	160.
Length of tubes,	12 feet 6 inches.
Outside diameter of tubes,	3 inches.
Total heating surface,	1,998 square feet.
Total grate surface when tested,	30½ square feet.
Ratio of grate to heating surface,	65½ to 1.

When the time arrives for the boiler to do more work than that on the second test, the brick can be removed and the grate restored to its original size, if thought desirable. It is probable, however, that the boiler will be economical when driving the two Worthington engines and the McAlpine engine with the present grate surface if the draft is sufficiently strong. It would require 29 pounds of coal to be burnt per square foot of grate per hour to do this work, but as this type of boiler is proverbial for high efficiency when worked hard, there is no doubt of its efficiency when doing this work.

Respectfully submitted,

F. W. DEAN.

Results of the Two Trials of an 86-inch Belpaire Boiler at the Pumping Station of the New Bedford Water Works:

Kind of fuel,	Georges Creek Cumberland.	
Date of trials,	May 18th.	May 19th.
Duration of trials,	12.3 hours.	12.26 hours.
Dimensions and Proportions:		
Grate surface, total,	30.5 square feet.	30.5 square feet.
Water, heating surface, total,	19.98 square feet.	19.98 square feet.
Ratio of water heating surface to grate surface,	65.5 square feet.	65.5 square feet.
Average Pressures:		
Steam pressure boiler by gauge,	114.05 pounds.	113.35 pounds.
Absolute steam pressure,	128.47 pounds.	127.93 pounds.
Atmospheric pressure per barometer,	14.42 pounds.	14.58 pounds.
Force of draught in inches of water,	.35 inches.	.54 inches.
Average Temperatures:		
Of external air,	57.9 degrees.	62.4 degrees.
Of fire room,	94.5 degrees.	96.8 degrees.
Of steam,	346.2 degrees.	345.9 degrees.
Of escaping gases after leaving feed water heater,	360.3 degrees.	468.8 degrees.
Of feed water before entering feed water heater,	135.3 degrees.	126.56 degrees.
Of feed water before entering boiler,	158.7 degrees.	154 degrees.
Fuel:		
Total amount of coal consumed,	3,501 pounds.	6,334 pounds.
Moisture in coal,	5.15 per cent.	5.15 per cent.
Dry coal consumed,	3,321 pounds.	6,008 pounds.
Total refuse dry,	206 pounds.	309 pounds.
Total refuse dry,	6.20 per cent.	5.10 per cent.
Total combustible, (dry weight of coal less refuse,)	3,115 pounds.	5,699 pounds.
Dry coal consumed per hour,	270 pounds.	490 pounds.
Combustible consumed per hour,	253 pounds.	465 pounds.
Calorific value of one pound of coal by experiment,	14,092 B. T. U.	14,092 B. T. U.
Calorific value of one pound of coal by analysis,	14,977 B. T. U.	14,977 B. T. U.

RESULTS OF CALORIMETRIC TESTS:

Quality of steam, dry steam being taken as unity,	.9961	.9962
Percentage of moisture in steam,	0.39 per cent.	0.38 per cent.

WATER:

Total weight of water pumped into boiler and apparently evaporated,	36,718 pounds.	66,924 pounds.
Water actually evaporated, corrected for quality of steam,	36,575 pounds.	66,663 pounds.
Equivalent water evaporated into dry steam from and at 212° F.,	40,122 pounds.	73,529 pounds.
Equivalent water evaporated into dry steam from and at 212° F. per hour,	3,262 pounds.	5,997 pounds.

ECONOMIC PERFORMANCE:

Water actually evaporated per pound of dry coal from average pressure and temperature,	11.01 pounds.	11.09 pounds.
Equivalent water evaporated per pound of dry coal from and at 212° F., excluding feed water heater,	12.08 pounds.	12.23 pounds.
Equivalent water evaporated per pound of dry coal from and at 212° F., including feed water heater,	12.35 pounds.	12.55 pounds.
Equivalent total heat derived from a pound of dry coal, excluding feed water heater,	11,667 B. T. U.	11,812 B. T. U.
Equivalent total heat derived from a pound of dry coal, including feed water heater,	11,927 B. T. U.	12,121 B. T. U.
Equivalent water evaporated per pound of combustible from and at 212° F., excluding feed water heater,	12.88 pounds.	12.90 pounds.
Equivalent water evaporated per pound of combustible from and at 212° F., including feed water heater,	13.17 pounds.	13.23 pounds.

Efficiency of boiler, excluding feed water heater,	77.23 per cent.	78.87 per cent.
Efficiency of boiler, including feed water heater,	79.70 per cent.	80.93 per cent.
RATE OF COMBUSTION:		
Dry coal actually burned per square foot of grate surface per hour,	8.85 pounds.	16.06 pounds.
RATE OF EVAPORATION:		
Water evaporated from and at 212° F., per square foot of heating surface per hour,	1.63 pounds.	3.00 pounds.
COMMERCIAL HORSE POWER:		
On basis of 30 pounds of water per hour evaporated from temperature of 100° F. into steam of 70 pounds gauge pressure, (34 ½ pounds from and at 212° F.)	94.55 H. P.	173.84 H. P.

COAL ANALYSIS:

Moisture,	.49 per cent.
Carbon,	84.55 "
Hydrogen,	4.88 "
Nitrogen,	1.00 "
Oxygen,	3.86 "
Ash,	4.61 "
Sulphur,	.61 "
	100.00

Engine No. 1 (McAlpine) has been in operation 2,922 hours, making 2,575,164 revolutions and pumping 754,523,052 gallons of water.

The repairs of this engine have been a renewal of the rubber foot and plunger valves, 10 in number, of the east pump; also the two rubber valves of the air pump. Other repairs have been very slight.

The cost of pumping has been as follows, viz:

Salaries 19 weeks,	at	$112.66	$2,140.00	
164.8213 gross tons Pocahontas coal,	"	4.20	692.25	
7.3661 gross tons Pocahontas coal,	"	4.69¼	34.56	
342.1874 gross tons Georges Creek Cumberland coal,	"	4.24½	1,451.73	
8.8169 gross tons Pea coal,	"	3.45	30.42	
1-5 cord white pine wood,	"	4.00	.80	
45 gallons cylinder oil,	"	.48	21.60	
19⅜ gallons sperm oil,	"	.98	18.99	
60 gallons lubricating oil,	"	.32	19.20	
109 pounds of waste,	"	.10	10.90	
6 pounds of ⅝-inch flax packing,	"	.65	3.90	
7 pounds of rainbow packing,	"	.75	5.25	
1 hand hole gasket,			.20	
6 brooms,	"	.25	1.50	
85,700 cubic feet of gas consumed,	"	1.36	116.55	
Repairs to engine,			248.83	
Repairs to boilers,			8.00	$4,805.28

Cost of raising water into distributing reservoir, per million gallons,	$6.37
Cost of raising water one foot high per million gallons,	$4\frac{71}{100}$ cents.

Engine No. 2 (Worthington) has been in operation 844 hours, making 865,804 revolutions and pumping 128,138,992 gallons of water.

The cost of pumping has been as follows:

Salaries 5½ weeks,	at	$112.66	$619.65	
45.26786 gross tons Pocahontas coal,	"	4.20	190.12	
8.41694 gross tons Pocahontas coal,	"	4.69¼	39.50	
53.48213 gross tons Georges Creek Cumberland coal,	"	4.24½	226.90	
10.78124 gross tons Pea coal,	"	3.45	37.19	
⅔ cord white pine wood,	"	4.00	2.67	
16⅞ gallons cylinder oil,	"	.48	8.10	
2⅝ gallons sperm oil,	"	.98	2.57	
10½ gallons lubricating oil,	"	.32	3.36	
32 pounds waste,	"	.10	3.20	
1 hand hold gasket,			.20	
10,500 cubic feet gas consumed,	"	1.36	14.28	
Repairs to engine,			85.99	
Repairs to boilers,			8.00	$1,241.73

Cost of raising water into distributing reservoir, per million gallons,	$9.69
Cost of raising water one foot high, per million gallons,	$7\frac{66}{100}$ cents.

Engine No. 3 (Worthington High Duty) has been in operation 4,185 hours 30 minutes, making 4,782,154 revolutions and pumping 927,737,876 gallons of water.

The cost of pumping has been as follows:

Salaries 27½ weeks,	at	$112.66	$3,098.23	
224.33037 gross tons Pocahontas coal,	"	4.20	942.19	
183.37629 gross tons Pocahontas coal,	"	4.69¼	860.49	
71.74106 gross tons Georges Creek Cumberland coal,	"	4.24½	304.36	
9.64731 gross tons Georges Creek Cumberland coal,	"	5.00	48.24	
39.68748 gross tons Pea coal,	"	3.45	136.92	
¾ cord white pine wood,	"	4.00	3.00	
91⅜ gallons cylinder oil,	"	.48	43.68	
22⅜ gallons sperm oil,	"	.98	21.93	
91½ gallons lubricating oil,	"	.32	29.28	
112½ pounds waste,	"	.10	11.25	
12 pounds square flax packing,	"	.65	5.40	
2 pounds Garlock's packing,	"	1.00	2.00	
4 pounds square rubber packing,	"	1.25	5.00	
25 pounds Duval's packing,	"	2.60	65.00	
1 water glass,			.25	
7 brooms,	"	.25	1.75	
Repairs to engine,			54.23	
Repairs to boilers,			8.00	
Removal of feed water heater boilers 5 and 6,			748.00	$6,389.20

Cost of raising water into distributing reservoir, per million gallons,	$6.89
Cost of raising water one foot high, per million gallons,	$5\frac{39}{100}$ cents.

Total cost of pumping for the past year may be summarized as follows, viz.:

1st. Figured on pumping station expenses, viz.:	$12,436.21
Cost of fuel used,	$5,001.34
Salaries, engineers, firemen, watchmen,	5,858.48
Cost of oil, waste, packing and other supplies,	415.34
Repairs and alterations on machinery and boilers,	1,161.05
Total pumping expenses,	$12,436.21

Raising water into reservoir, per million gallons,	$6.87
Raising water per million gallons, one foot high,	5¼ cents.
2d. Figured on total maintenance,	$78,922.84
Raising water into reservoir, per million gallons,	$43.59
Raising water per million gallons, one foot high,	$33\frac{32}{100}$ cents.

The distributing mains have been increased 29,139 feet, and there has been 10,114 feet of pipe, previously laid, removed. The total number of miles of pipe now in use is 72.2343.

The following list of special work has been done in improving the distributing system. The placing of these new lines has caused the removal of 6,084 feet of wrought iron cement lined pipe of smaller size in each case.

Union street, Front to Water, 280 feet 8-inch; replacing 4-inch cast-iron.

Union street, Water to Purchase, 840 feet 12-inch; replacing 8-inch cement lined.

Union street, Purchase to Sixth, 496 feet 10-inch; replacing 8-inch cement lined.

Purchase street, Union to North, 1,768 feet 12-inch; replacing 10-inch cement lined.

Purchase street, North to Pearl, 1,916 feet 16-inch; replacing 10-inch cement lined.

William street, Water to Purchase, 843 feet 8-inch; replacing 4-inch cast-iron.

Elm street, Purchase to Pleasant, 274 feet 6-inch; replacing 4-inch cement lined.

Middle street, Purchase to Pleasant, 282 feet 6-inch; replacing 6-inch cement lined.

Kempton street, Purchase to Pleasant, 226 feet 10-inch; replacing 4-inch cast-iron.

Kempton street, Purchase to Acushnet avenue, 254 feet 10-inch.

North street, Purchase to Pleasant, 225 feet 8-inch; replacing 4-inch cement lined.

Hillman street, Purchase to Pleasant, 223 feet 10-inch; replacing 8-inch cement lined.

Pearl street, Purchase to Pleasant, 200 feet 10-inch.

This work required the placing of:

1,878 feet 16-inch cast-iron pipe.
2,528 feet 12-inch cast-iron pipe.
1,487 feet 10-inch cast-iron pipe.
1,339 feet 8-inch cast-iron pipe.
772 feet 6-inch cast-iron pipe.
102 feet 4-inch cast-iron pipe.
49 stop gates.
22 fire hydrants.

The cost was as follows:

Pipe,	$7,948.74	
Special castings,	870.36	
Gates,	1,816.77	
Hydrants,	766.00	
Lead and gasket,	1,106.06	
Blacksmithing and plumbing,	158.68	
Repairing road-bed and drains,	131.11	
Carting,	391.38	
Labor,	4,047.45	
Other expenses,	249.29	$17,485.84
Credit, by value of pipe and specials removed,		330.88
		$17,154.96

The laying of a 10-inch main in William street, from Purchase to Pleasant, remains to be done to complete the connections which have been planned.

At the north end the following described lines of pipe have been laid:

Washburn street, Acushnet avenue to Front, 857 feet 12-inch pipe.
Front street, Washburn to Coggeshall, 892 feet 12-inch pipe.
Front street, Coggeshall to Sawyer, 677 feet 10-inch pipe.
Coggeshall street, Front, east, 1,415 feet 10-inch pipe.

In doing this the following list of pipe has been removed:

Washburn street, Acushnet avenue to Front street, 6-inch cast-iron.
Front street, 120 feet south of Cedar Grove to 109 feet north of Coggeshall, 6-inch cast-iron.
Coggeshall street, Front to 228 feet east of Mitchell street, 6-inch cast-iron.

This work required the placing of:

1,712 feet 12-inch pipe.
2,049 feet 10-inch pipe.
63 feet 6-inch pipe.
28 feet 4-inch pipe.
18 stop gates.
6 fire hydrants.

The cost was as follows, viz.:

Pipe,	$3,546.68	
Special castings,	387.47	
Gates and hydrants,	793.80	
Lead and gasket,	390.10	
Carting,	120.00	
Labor,	1,468.13	$6,706.18
Credit, by value of pipe and specials removed,		763.19
		$5,942.99

There have been eight leaks upon the mains the past year, as herewith shown:

Date.	Size.	Location.	Cause.	Cost.
March 20,	6-in.	Second st., northwest cor. Grinnell,	Joint started,	$ 4.00
June 29,	6-in.	Walnut st., at Fourth,	Pipe broken by sewer department,	2.35
July 12,	2-in.	Near east side Fish Island,	Joint broken,	12.20
July 14,	2-in.	In river,	Pipe burst,	41.00
July 15,	2-in.	Fish Island,	Pipe burst in a tee,	12.74
Aug. 26,	6-in.	Foot of Middle st.,	Joint started,	2.86
Sept. 21,	4-in.	Crapo st., at Rockland,	Joint started,	2.00
Oct. 2,	6-in.	Palmer st., south of Court,	Joint started,	3.25

Four hundred service pipes have been laid during the past year, and three of those previously laid have been removed. The total number now in use is 7,531.

One hundred forty-six service taps have been cleared as follows, viz.: Rust, 101; eels, 36; trouble inside, 9.

Seventy-eight new hydrants have been set, and 35 of those previously set have been removed. The total number now in use is 585.

Eighty-nine stop-gates have been set, and 23 previously set have been removed. The total number now in use is 808.

Nine new waste-gates have been set, and seven of those previously set have been removed. The total number now in use is 74.

Nine private stop-gates have been set. The total number now in use is 171.

Twenty-two feet of small sized distribution pipe (less than four-inch) have been laid. Total length now in use 5,944 feet.

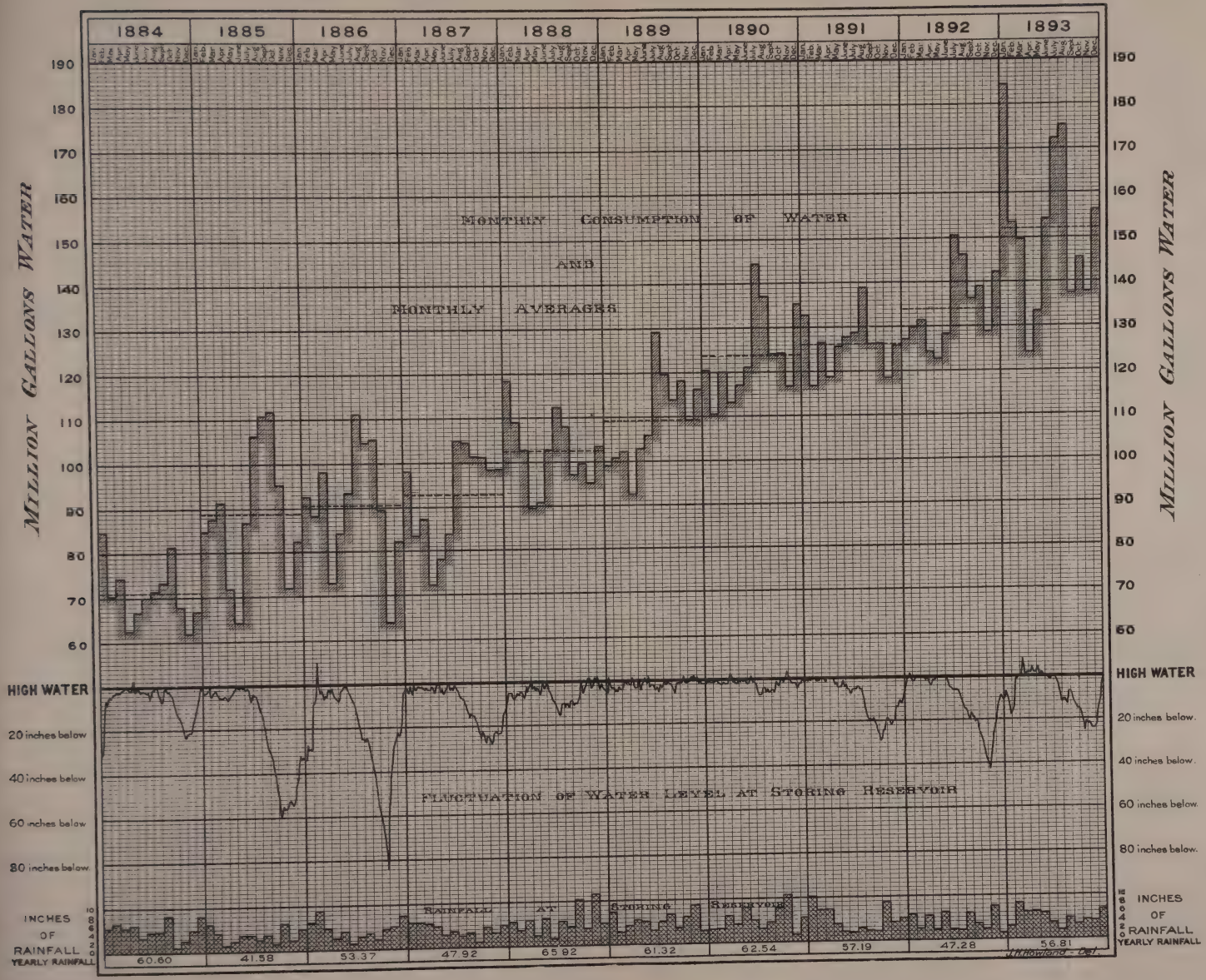
The total number of small sized stop-gates (less than four-inch) is 62.

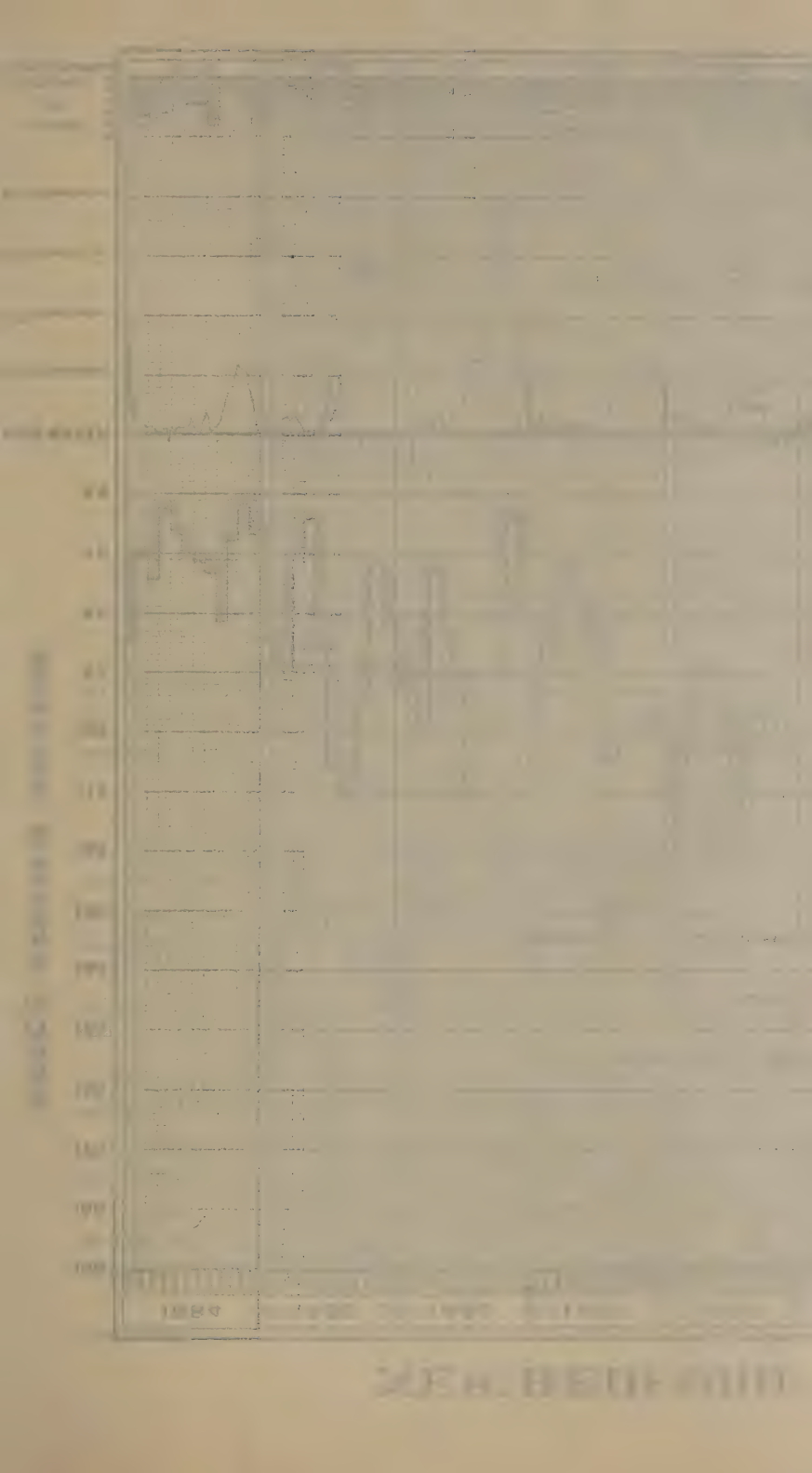
The total number of motors is 31.

The total number of meters is 172.

The following tables, together with the annexed diagram, present interesting statistics in regard to the consumption, the fluctuation of the water level in the storing reservoir, and the rainfall.

NEW BEDFORD WATER WORKS





Monthly Consumption and Record of Pressure at the City Hall.

1893. Month.	Monthly Consumption.	Daily Average.	Pounds Pressure. 10 A. M.			Pounds Pressure. Midnight.		
	Gallons.	Gallons.	Max.	Min.	Av.	Max.	Min.	Av.
January,	184,387,520	5,947,985	35	29	32	37	34	36
February,	153,677,954	5,488,498	35	30	32	38	34	36
March,	149,779,593	4,831,600	35	30	33	38	34	36
April,	124,090,700	4,136,357	38	31	34	38	34	37
May,	133,472,293	4,305,558	40	31	34	38	34	36
June,	154,279,537	5,142,651	38	30	34	37	33	36
July,	172,289,023	5,557,710	37	29	33	38	33	36
August,	175,005,660	5,645,344	38	32	33	37	34	36
September,	137,644,745	4,588,158	35	31	33	36	32	35
October,	145,419,325	4,690,946	35	30	32	37	33	35
November,	137,967,585	4,598,920	35	31	33	36	33	35
December,	156,261,601	5,040,697	35	31	33	37	34	35
Averages,	152,022,961	4,997,869	36	30	33	37	34	36

COMPARISON OF THE CONSUMPTION OF THE YEAR 1893, WITH THE RECORD OF THE TWELVE PREVIOUS YEARS.

Year.	Estimated Populat'n.	Estimated Number of Consumers.	Total Number of Gallons Consumed.	Average Daily Consumption.	Number of Taps.	Gallons per Day to Each Inhabitant.	Gallons per Day to Each Consumer.	Gallons per Day to Each Tap.
1881,	27,000	19,044	844,249,647	2,313,012	3,985	86	122	589
1882,	28,500	20,424	859,119,622	2,326,352	4,203	82	114	553
1883,	30,000	22,249	849,059,700	2,326,191	4,465	78	105	521
1884,	33,000	23,749	867,815,595	2,371,080	4,691	72	100	506
1885,	33,700	25,375	1,049,801,050	2,876,167	4,965	85	113	579
1886,	34,500	28,480	1,086,534,615	2,976,807	5,225	86	104	569
1887,	36,000	30,080	1,112,302,789	3,047,404	5,495	85	101	555
1888,	37,500	31,826	1,229,841,794	3,360,223	5,785	89	109	581
1889,	40,000	34,000	1,310,488,214	3,590,379	6,104	90	106	588
1890,	41,500	35,740	1,485,143,213	4,066,200	6,394	98	114	636
1891,	45,000	38,500	1,513,161,482	4,145,648	6,742	92	108	615
1892,	50,000	41,776	1,607,955,166	4,393,320	7,134	88	105	616
1893,	55,000	44,158	1,824,275,536	4,998,015	7,531	99	113	664

The maximum daily consumption was on Wednesday, January 11th, 7,398,836 gallons, and the minimum was on Sunday, May 7th, 3,125,575 gallons.

The rate of increase in the amount used has been 13 1-2 per cent. in excess of the figures presented last year.

There have been five days when the consumption has exceeded 7,000,000 gallons, 17 days it has surpassed 6,500,000 gallons, and on 44 days it has been in excess of 6,000,000 gallons.

Abundant opportunity has been afforded to practically test the capacity of the conduit. The result of a number of observations shows that when the ground is well filled with water, as in the early spring, the extreme limit of its daily delivery is 6 3-4 millions gallons. In the dry weather of summer, with a full storing reservoir, nearly 6 1-2 millions gallons daily can be obtained. As the reservoir settles this amount is reduced until we reach the low water level of 1886, viz.: 84 inches below high water, when it will not be possible to obtain 3,000,000 gallons daily. The conduit ought not to be depended upon to deliver over 6,000,000 gallons daily. That is a fair amount of work for it to do. We have had 44 days during the past year when the daily (not consecutive) consumption has exceeded that amount. As the weekly average approaches these figures, we shall indeed be perplexed to maintain the supply with our present facilities.

With all this you are familiar, and the preliminary work looking toward an additional supply, which is being done for you by Messrs. Rice and Evans, is now well under way. None too soon, however, for under the best of conditions we cannot expect to avail ourselves of it in less than two years (probably longer), by which time our consumption will certainly reach figures beyond our extreme limit of supply.

I say it will certainly reach this limit, but it is possible to hold the present amount in check for a while, and even

reducing it from its present rate. This can be accomplished by the introduction of meters, as has been frequently stated in former reports.

We rank among the largest users of water, either per capita or per tap, in the Commonwealth. We might take a position somewhat nearer the general average without causing any embarrassment to our takers.

Meter measurements are fair and equitable. Complaint is occasionally made that the system sometimes pinches the pocket-book of the taker pretty hard. This may be true, if a large amount of water has been allowed to run to waste, and it then pinches to some purpose, if the taker will only heed the warning which is taught by such an object lesson.

Annexed to this document will be found the usual tables giving full information in the matter of the work which has been done. Mr. Thomas R. Rodman kindly contributes a copy of his record of the rainfall.

Respectfully submitted,

R. C. P. COGGESHALL,

Superintendent.

TABLE A.

Showing Rainfall at Storing Reservoir for 1893.

Day.	Jan.	Feb.	March.	April.	May.	June.	July.	August.	Sept.	Oct.	Nov.	Dec.
1	.08	.45	.52					.25				.54
2	1.67				.51				.67			.01
3	.03	.20			.25							1.34
4			.22	.52	2.10		.22				.44	.30
5							.80	1.55			.85	.57
6		.40		.16	.31							.11
7		1.22		.14								
8				1.25					.18			
9			2.15	.34								
10		2.10	1.75			.34						.58
11												
12			.27					.05				
13	.05	1.38		.20			.20					
14		.50			.54	.32				.93		
15			.53	.98							.47	.72
16	.35								.61			.25
17					1.94	.34						1.66
18							.08	.23				
19		1.12							.54			
20												
21			.11	1.96				2.20				
22		.54				1.17					.98	
23		.02	.20			1.22	.21			.85		
24			.16			.20	.20	.41		2.14		
25				.24					.84			
26		.20			.13				.24			
27				.38								
28									.10	.18	1.24	
29			.15									
30	.65											
31												.51
Totals,	2.83	8.13	6.06	6.17	5.78	3.59	1.71	4.69	3.18	4.10	3.98	6.59

Total fall for the year, 56.81.

TABLE A.

RAINFALL AS RECORDED AT THE STORING RESERVOIR FOR THE PAST SIXTEEN YEARS.

YEARS.	MONTHS.												TOTALS.
	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	
1878,	8.03	5.75	6.71	6.13	3.29	2.66	2.89	3.60	1.30	8.88	7.96	6.77	63.97
1879,	3.31	2.57	6.27	7.14	2.25	4.34	4.89	5.74	2.86	1.02	4.44	4.63	49.45
1880,	2.02	3.13	5.12	5.79	1.32	1.94	9.46	7.91	2.27	3.87	3.49	3.28	49.60
1881,	5.82	7.48	7.21	2.16	3.17	8.92	1.80	1.28	5.24	.75	6.51	2.98	53.32
1882,	3.80	6.40	3.99	5.05	4.55	3.48	3.02	1.36	7.78	4.39	2.58	3.70	50.10
1883,	5.92	4.44	1.63	2.80	3.70	2.14	4.97	.70	2.68	8.05	3.82	3.55	44.40
1884,	5.55	6.68	5.53	6.03	3.20	4.45	4.67	8.17	.96	2.47	4.84	8.05	60.60
1885,	6.14	4.03	1.38	2.13	3.63	3.61	2.54	3.48	1.49	6.14	2.23	4.78	41.58
1886,	6.20	8.86	4.87	2.44	3.99	1.38	2.87	3.50	2.15	4.58	5.06	7.47	53.37
1887,	5.71	5.80	5.65	4.85	2.82	3.51	2.68	3.22	1.01	4.56	3.19	4.92	47.92
1888,	5.50	3.57	5.98	2.38	6.26	1.58	5.67	4.28	10.35	3.88	11.47	5.00	65.92
1889,	7.42	2.69	4.21	5.51	5.17	3.03	5.17	6.82	3.68	6.10	8.77	2.71	61.48
1890,	3.07	3.16	6.11	4.12	8.00	5.01	3.07	4.52	7.83	10.66	1.52	5.47	62.54
1891,	10.08	7.16	7.34	3.80	2.04	1.80	2.73	2.32	2.10	8.73	4.07	5.02	57.19
1892,	5.89	2.49	5.41	2.29	6.14	2.29	2.03	6.00	3.56	2.24	7.67	1.27	47.28
1893,	2.83	8.13	6.06	6.17	5.78	3.59	1.71	4.69	3.18	4.10	3.98	6.59	56.81
Totals,	87.29	82.34	83.47	68.79	65.31	53.73	60.17	67.59	58.44	80.42	81.60	76.19	865.34
Averages,	5.46	5.15	5.22	4.30	4.08	3.36	3.76	4.22	3.65	5.03	5.10	4.76	54.09

TABLE A.

Showing Rainfall at Pumping Station for 1893.

Day.	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1			.09					.25	.72			.56
2	1.12	.40										
3		.10			.78	.02	.35				.02	.15
4			.50	.35	2.12	.04				.02		1.84
5							.02	1.44		.02	.93	
6				.20	.41		.85					.64
7		1.04							.14	.03		
8				.95								
9	.70						.02					
10		1.20	3.61			.18						.41
11												
12			.29				.06	.03				
13	.90			.10		.02					.03	
14		1.35			.35	.41				.62		
15	.20		.34	.86					.30		.36	1.20
16	.16					.03			.46			
17				.20	1.23	.21		.36				1.17
18		1.35									.40	
19					.03				.47			.11
20		.24										
21			.06	1.42				2.74				
22		.93		.30			.17		.03		.62	.02
23	.05	.12	.30			1.27			.04	.04		
24		.60	.29		.07	.95		.36		1.76		
25		.33		.22			.19		.41			
26							.20		.22			.02
27				.37	.06		.02					
28		.49	.40		.01			.02	.50	.12	.71	.02
29	.65			.70			.08	.02				.16
30			.20	.40					.02			
31												.37
Totals,	3.78	8.15	6.08	6.07	5.06	3.13	1.96	5.22	3.31	2.61	3.07	6.67

Total fall for the year, 55.11.

TABLE A.

Showing Rainfall at New Bedford, as Registered by T. R. Rodman for 1893.

Day.	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1	.98		.56		.01							.66
2		.42			.54				.72			
3		.12					.41					
4			.37		2.31	.01						1.89
5				.50				1.53			.98	
6	.45			.30	.03		.96					1.04
7		.84							.17			
8	.01			.85								
9	.05			.34								
10		.96	3.84			.08						.39
11												
12			.29									
13	.20						.07					
14		1.50	.25	.05	.38	.51				.65		
15	.19			.96							.37	1.12
16	.05								.40			
17					1.08	.18						1.16
18								.43				
19		1.48			.01				.86			.08
20		.14										
21			.06	1.37				2.05				
22		1.00		.01			.20		.01		.66	
23	.05	.06							.02	.07		.01
24			.75		.07	2.22		.24		1.60		
25				.22								
26		.38					.45		.66			
27					.06		.21					
28				.41					.54	.13	.62	
29	.72		.06				.10	.01				.08
30				.12								
31												.32
Totals,	2.70	6.90	6.18	5.13	4.49	3.00	2.40	4.26	3.38	2.45	2.63	6.75

Total fall for the year, 50.27.

TABLE A.

RAINFALL FOR THE PAST EIGHTY YEARS. FURNISHED FROM THE RECORDS OF THOMAS R. RODMAN.

YEARS.	MONTHS.												TOTALS.
	JAN.	FEB.	MAR.	APRIL.	MAY.	JUNE.	JULY.	AUG.	SEPT.	OCT.	NOV.	DEC.	
1814	1.42	8.30	2.16	5.46	4.23	2.27	.99	6.44	3.06	1.73	5.37	1.65	43.08
1815	4.55	3.32	5.02	4.66	4.11	2.22	1.96	4.36	2.51	1.47	3.45	3.15	40.78
1816	2 12	6.82	2.47	5.50	6.15	2.33	1.01	1.46	6.05	3.96	5.56	.70	44.13
1817	3.96	5.26	1.77	2.60	1.19	7.00	.88	3.21	4.09	1.19	6.64	5.54	43.33
1818	3.31	.91	3.31	3.94	6.79	3.51	3.32	1.66	5.52	2.84	3.35	2.31	40.77
1819	1.25	2.54	7.30	3.31	2.06	3.32	1.57	6.00	4.81	3.84	1.92	1.74	39.66
1820	1.46	5.02	4.44	1.23	5.41	.46	3.71	4.38	2.01	6.22	3.75	3.23	41.32
1821	2.32	5.96	2.52	6.09	5.42	3.78	2.41	2.23	4.11	4.96	2.94	2.90	45.64
1822	3.29	3.70	3.31	4.76	.58	2.58	5.14	3.51	6.05	2.97	3.62	2.27	41.78
1823	4.84	5.00	8.43	1.83	7.67	3.20	4.63	3.90	2.08	5.06	3.51	9.74	59.89
1824	3.84	5.32	3.61	5.74	2.68	3.14	2.44	6.21	4.88	2.55	3.54	3.39	47.34
1825	2 80	2.21	6.06	1.42	2.11	3.71	2.06	3.52	1.68	2.78	1.81	7.93	38.09
1826	2 19	3.85	4.08	2.92	.73	2.11	2.44	18.72	1.44	7.47	4.50	4.32	54.77
1827	3.14	3.99	4.88	3.46	6.94	4.42	4.36	7.63	5.65	6.68	8.42	3.33	62 90
1828	3.02	3.25	4.31	3 48	3.91	4.04	3.02	1.15	3.63	3.62	5.16	.45	39.04
1829	9.06	5.76	7.03	4.79	8.59	2.92	3.40	7.53	3.49	3.53	7.18	2.13	65.41
1830	4 20	3.07	4.77	2.25	6.63	3.71	2.00	6.22	5.20	3.54	6.18	6.89	64.66
1831	7.47	3.53	5.24	7.38	4.45	3.52	7.26	3.32	5.86	6.04	3.68	3.43	61.18
1832	3.98	5.36	3.02	3.41	6.55	.41	1.69	8.30	3.00	2.64	4.43	6.52	49.31
1833	3.91	2.37	1.92	2.31	4.14	4.25	1.38	2.57	1.88	5.70	5.51	6.68	42.62
1834	2.76	1.61	1.95	2.94	4.74	7.30	3.42	1.81	5.63	5.25	4.23	3.48	45.12

TABLE A.—*Continued.*

Years.	MONTHS.												Totals.
	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	
1835	3.35	1.80	6.52	6.84	2.65	2.52	1.56	10.16	.90	2.99	2.97	4.95	47.21
1836	9.53	4.62	3.78	2.78	1.76	4.93	1.90	1.12	1.28	2.58	4.53	4.02	42.83
1837	3.69	3.75	4.47	3.33	6.47	4.41	2.15	4.37	.54	1.34	1.50	3.05	39.07
1838	3 00	2.41	2.90	2.15	3.02	2.84	1.55	2.99	6.71	5.38	4.36	.97	38.28
1839	.77	2.71	2.44	4 83	4.96	2.51	2.76	5.89	3.38	5.86	2.01	6.26	44.38
1840	3.25	2.68	3.99	4.56	5.82	3.69	2.14	2.88	3.07	6.93	7.52	3.06	49.59
1841	5.57	1.75	4.06	9.27	1.66	1.44	3.05	5.05	2.90	4.70	5.30	5.85	50.60
1842	2.47	4.34	2 89	3.77	3.17	7.40	1.34	1.97	2.00	.86	3.06	5.79	39.06
1843	3.94	4.18	4.02	6.19	1.39	1.45	3.31	7.13	1.77	6.86	5.09	5.34	50.67
1844	4.19	2.18	6.65	1.79	2.60	.90	3.08	2.49	4.15	4.56	4.01	4.13	40.73
1845	4.16	3.00	3.04	1.87	3.79	2.34	3.09	3.37	4.49	4.29	9.72	4.90	48.06
1846	3.09	2.57	1.74	1.20	6.40	.99	2.61	3.07	2.48	1.68	3.80	4.88	34.51
1847	3.33	4.57	3.25	1.66	2.64	6.46	2.41	7.15	7.20	.62	1.52	5.10	45.91
1848	3.75	4.22	2.89	1.46	3.88	2.99	4.04	1.16	1.89	5.43	3.30	5.73	40.74
1849	.88	2.07	5.70	2.23	2.43	1.59	1.22	4.88	1.24	5.71	5.15	3.32	36.42
1850	5.87	2.22	6.05	9.25	4.49	1.23	2.26	6.29	12.06	2.62	2.82	7.51	62.67
1851	2.24	6.20	3.27	4.84	4.78	1.18	9.22	3.49	3.75	5.37	4.76	2.51	51.61
1852	3.91	3.57	5.50	7.86	3.50	1.71	2.55	5.49	2.01	2.03	3.66	4.35	46.14
1853	1.69	4.67	1.28	3.92	4.36	.92	3.95	2.95	3.84	3.52	3.92	4.45	39.47
1854	1.99	5.67	2.15	6.83	3.565	3.025	7.435	.235	8.37	1.485	9.665	3.40	53.82
1855	4.725	2.62	1.95	4 24	3.635	1 835	4.79	1.42	.62	4.655	4.825	5.68	40.995
1856	5.185	1.27	1.64	3.205	3.96	2.115	3.32	2.81	4.555	1.89	3.26	3.88	37.09
1857	6.20	1.845	2.52	5.905	3.69	2.305	4.615	3.94	2.315	2.635	1.845	5.49	43.305
1858	2.465	1 28	2.28	4.39	2.025	5.155	6.75	5.05	3.015	3.205	3.835	4.58	44.03
1859	8.53	4.40	6.64	3.44	5.135	6.155	.955	4.015	3.645	2.07	2.105	4.34	51.43

1860	1.37	3.50	2.825	2.865	2.795	3.26	2.96	5.00	5.245	1.825	3.435	4.65	39.73
1861	4.19	3.25	4.06	5.44	4.42	3.115	1.705	5.00	3.50	4.295	4.58	2.905	46.46
1862	3.27	3.875	2.805	1.665	2.855	8.05	3.065	1.20	3.985	5.625	4.47	2.455	43.32
1863	2.75	4.165	4.265	4.335	3.520	2.49	4.265	2.51	2.50	1.895	7.03	5.37	45.095
1864	4.35	1.51	5.52	3.10	2.93	1.08	1.50	7.675	2.28	2.35	4.185	4.485	40.965
1865	5.51	3 915	4.90	3.235	6.36	1.66	5.15	1.21	.265	4.93	4.47	4.405	46.01
1866	2.30	4.54	3.695	2.06	4.15	4.175	1.855	3.60	5.325	2.635	2.65	3.31	40.295
1867	2.845	5.085	5.58	3.175	3.85	2.36	6.03	5.705	2.435	3.96	1.99	4.095	47.11
1868	6.17	2.43	4.64	5.96	9.42	6.51	3.785	4 495	5.91	1.68	2.985	2.34	56.325
1869	3.97	5.335	6.215	1.42	5.915	4.45	1.625	2.765	2.62	6.75	2.305	6.565	49.935
1870	6.195	4.55	3.46	6.195	3.505	3.62	3 05	1.69	1.28	6.64	3.28	3.70	47.165
1871	3.255	3.28	4.86	3.93	2.675	5.39	1 92	6.35	2 235	6.385	6.985	2.335	49.60
1872	2.645	2.415	5.33	2.27	3.51	2.685	6.395	4.04	4.58	5.79	3.585	4.42	47.665
1873	7.235	4.93	2.89	3.985	4.95	1.435	1.225	4.165	3.17	5.335	6.315	6.06	51.695
1874	4.27	4.27	1.59	8.57	5.11	3.695	3.845	7.66	2.94	.55	3.49	3.345	49.335
1875	3.78	3.67	7.86	4.045	4.195	4.985	4.005	4.595	2.38	3.02	4.855	.94	48.33
1876	1.015	4.85	5.535	3.850	1.68	.73	3.865	1.23	4.40	1.52	8.420	5.09	42.185
1877	3.060	1.79	9 420	3.130	2.92	2.36	4.930	3.39	.83	7.66	6.595	.95	47.035
1878	5.970	4.05	4.770	4.945	2.91	2 97	2.360	5.38	1.04	5.93	5.740	4.49	50.555
1879	3.420	3.00	5.560	5.120	1.83	2.78	3.590	4.37	3.18	1.19	3.550	4.72	42.310
1880	2.060	2.97	4 850	3 490	1.37	1.96	6.590	5.62	1.68	3.11	2.440	3.92	40.070
1881	4 140	5.83	4.740	1.790	2.39	5.14	1.650	.79	3.29	1.52	5.780	2.04	39.100
1882	4.140	6.23	2.480	4.060	4.74	1.70	1.520	.89	6.26	4.00	1.910	3.45	41.380
1883	4.730	4.67	2.080	2.930	3.60	1.46	6.920	.85	2.74	6.36	3.280	3.89	43 510
1884	4.850	5.72	5.290	5.170	3.33	5.38	4.800	8.49	.98	1.63	3.550	5.80	54.990
1885	5.200	2 76	1 490	2.660	3.15	4.06	1.170	4.23	1.85	4 04	3.160	3 04	36.810
1886	6.770	7.05	5.090	2.190	4.39	1.99	2.690	2.76	2.15	4.23	3.760	6.78	49.850
1887	6.020	6.25	5.830	5.450	2.24	3.15	3.610	6.68	1.71	3.95	2.600	4.28	51.770
1888	4.380	2.63	5.660	2.420	5.57	1.45	5.170	4.89	9.52	2.66	7.390	3.33	55.070
1889	5.79	2.92	2.83	4.31	5.14	3.83	5.44	5.73	3.87	4.11	6.07	2.67	52.71
1890	2.66	2.36	9.77	4.09	6.73	5.90	1.91	3.82	7.55	10.09	1.32	5.49	61.69
1891	8.36	7.00	5.81	2.78	2.44	1.55	1.97	2.09	2.31	6.97	3.17	3.38	47.83
1892	4.48	2.34	5.78	2.31	5.46	2.23	1.72	4.58	3.65	1.86	6.78	1.64	42.83
1893	2.70	6 90	6.18	5.13	4.49	3 00	2.40	4.26	3.38	2.45	2.63	6.75	50.27
Totals,	316.515	307.785	342.88	315.365	321.40	252.89	265.83	341.21	281.86	310.255	344.04	328.35	3,728.44
Avgs.,	3.956	3.847	4.286	3.942	4.018	3.161	3.323	4.265	3.523	3.878	4.301	4.104	46.606

TABLE B.

Statement of Work Done by Pumping Engine No. 1 (McAlpine) for the Year Ending December 1, 1893.

Months.	Number of days or parts of days pumping.	Total pumping time per month.		Total number of strokes per month.	Average number of strokes per minute.	FUEL.						Total number of gallons pumped per month, allowance being made for slip.	No. of gallons pumped per pound of coal for total coal.	No. of gallons raised 100 feet per pound of coal for total coal.	Av. dynamic head against pump in feet, no allowance for friction in suction.	Av. duty in pounds raised one foot high per 100 pounds of coal, calculated on total fuel used for all purposes, no deductions.	Av. duty in pounds raised one foot high per 100 pounds of coal, calculated on amount of combustible coal used while pumping.
						lbs. of wood / 3 = Coal	COAL.										
							Raising steam and banking.	Ashes and Clinkers.	Pumping.	Total.	Total fuel.						
		H.	M.	STROKES.		LBS.	LBS.	LBS.	LBS.	LBS.	LBS.	GALS.	GALS.	GALS.	FEET.	LBS.	LBS.
December, 1892,	14	209	00	194,207	15.5		7,800	7,252	75,548	90,600	90,600	56,902,651	628	847	134.84	70,629,982	84,702,128
January, 1893,	2	44	00	40,243	15.3			1,368	15,732	17,100	17,100	11,791,199	690	924	133.9	77,003,149	83,699,075
February, "	28	562	00	522,812	15 5	200	8,400	18,976	209,824	237,200	237,267	153,183,916	646	873	135.14	72,765,546	82,282,593
March, "	3	60	00	55,663	15.5		1,500	1,944	20,856	24,300	24,300	16,309,259	671	902	134.41	75,235,981	87,659,874
April, "																	
May, "																	
June, "																	
July, "	15	334	00	299,169	15.7			10,792	124,108	134,900	134,900	87,656,517	650	878	135.13	73,230,178	79,598,019
August, "	28	611	00	529,076	14.4			18,984	218,316	237,300	237,300	155,019,268	653	885	135.46	73,801,479	80,218,999
September, "	28	522	00	438,359	14.0		7,600	16,232	179,068	202,900	202,900	128,439,187	633	853	134.84	71,186,935	80,661,141
October, "	31	580	00	495,635	14.2	110	8,500	18,212	200,938	227,650	227,687	145,221,055	602	819	135.64	72,151,470	81,756,322
November, "																	
Totals and Av.,	149	2,922	00	2,575,164	14.7	310	33,800	93,760	1,044,390	1,171,950	1,172,053	754,523,052	644	870	135.2	72,588,530	81,461,528

TABLE B.

Statement of Work Done by Pumping Engine No. 2 (Worthington) for the Year Ending December 1, 1893.

Months.	Number of days or parts of days pumping.	Total pumping time per month.		Total number of strokes per month.	Average number of strokes per month.	FUEL.						Total number of gallons pumped per month, allowance being made for slip.	No. of gallons pumped per pound of coal for total coal.	No. of gallons raised 100 feet per pound of coal for total coal.	Av. dynamic head against pump in feet, no allowance for friction in suction.	Av. duty in pounds raised one foot high per 100 pounds of coal, calculated on total fuel used for all purposes, no deductions.	Av. duty in pounds raised one foot high per 100 pounds of coal, calculated on combustible coal used while pumping.
							COAL.										
						lbs. of wood / 3 = Coal	Raising steam and banking.	Ashes and clinkers.	Pumping.	Total.	Total fuel.						
		H.	M.	STROKES.		LBS.	LBS.	LBS.	LBS.	LBS.	LBS.	GALS.	GALS.	GALS.	FEET.	LBS.	LBS.
December, 1892,	4	70	30	78,431	18.5	200	1,000	1,845	20,155	23,000	23,067	11,607,788	505	656	125.9	52,838,458	60,472,573
January, 1893,	18	270	30	253,334	15.6	200		6,272	72,128	78,400	78,467	37,493,432	478	606	126.81	50,534,468	54,975,711
February, "																	
March, "																	
April, "	2	17	00	18,161	17.8	300		484	5,570	6,054	6,154	2,687,828	444	562	126.47	46,067,808	50,897,897
May, "	2	18	00	17,387	16.1	100		408	4,292	5,100	5,133	2,573,276	505	638	126.36	52,831,236	63,183,303
June, "	3	26	00	26,362	16.9			616	7,084	7,700	7,700	3,901,576	507	645	127.2	53,752,962	58,427,147
July, "	7	122	00	125,093	17.1	200		3,308	38,042	41,350	41,417	18,513,764	448	566	126.26	47,070,403	51,246,383
August, "	8	132	00	136,374	17.2			3,220	37,030	40,250	40,250	20,183,352	501	634	126.46	52,886,721	57,485,566
September, "	3	60	00	64,207	17.8			2,632	17,068	18,700	18,700	9,502,636	508	645	126.9	53,781,159	58,923,581
October, "																	
November, "	6	128	00	146,455	19.1		400	3,496	39,754	43,650	43,650	21,675,340	497	627	126.09	52,218,978	57,336,579
Totals and Av.,	53	844	00	865,804	17.1	1,000	1,400	22,281	241,123	264,204	264,537	128,138,992	485	614	126.52	51,111,675	56,074,821

TABLE B.

Statement of Work Done by Pumping Engine No. 3 (Worthington) for the Year Ending December 1, 1893.

Months.	Number of days or parts of days pumping.	Total pumping time per month.		Total number of strokes per month.	Average number of strokes per minute.	FUEL.						Total number of gallons pumped per month, allowance being made for slip.	No. of gallons pumped per pound of coal for total coal.	No. of gallons raised 100 feet per pound of coal for total coal.	Av. dynamic head against pump in feet, no allowance for friction in suction.	Av. duty in pounds raised one foot high per 100 pounds of coal, calculated on total fuel used for all purposes, no deductions.	Av. duty in pounds raised one foot high per 100 pounds of coal, calculated on amount of combustible coal used while pumping.
						lbs. of wood = lbs. Coal	COAL.				Total fuel.						
							Raising steam and banking.	Ashes and clinkers.	Pumping.	Total.							
		H.	M.	STROKES.		LBS.	LBS.	LBS.	LBS.	LBS.	LBS.	GALS.	GALS.	GALS.	FEET.	LBS.	LBS.
December, 1892,	15	325	00	375,748	19.3		2,000	7,440	83,560	93,000	93,000	72,895,112	784	1,004	128.11	83,746,090	93,207,113
January, 1893,	28	617	30	701,972	18.9		600	13,480	154,420	168,500	168,500	136,182,568	808	1,035	128.15	86,378,623	94,254,617
February, "																	
March, "	28	603	30	690,538	19.1		2,700	13,320	150,480	166,500	166,500	133,964,372	805	1,032	128.16	85,999,044	95,154,445
April, "	30	551	30	625,788	18.9	700	6,800	12,349	135,214	154,303	154,596	121,402,872	787	1,000	127.07	83,222,314	95,151,663
May, "	31	601	00	677,312	18.8	500	6,600	14,356	158,504	179,460	179,627	131,398,528	732	933	127.43	77,742,163	88,102,454
June, "	30	667	30	771,038	19.3		2,400	14,512	164,488	181,400	181,400	149,581,372	825	1,056	128.02	88,040,825	97,092,831
July, "	13	292	00	339,803	19.4		800	6,444	73,306	80,550	80,550	65,921,782	818	1,051	128.52	87,720,310	96,388,712
August, "																	
September, "																	
October, "																	
November, "	25	527	30	599,955	19.0		3,600	12,056	135,044	150,700	150,700	116,391,270	772	990	128.22	82,590,287	92,165,193
Totals and Av.,	200	4,185	30	4,782,154	19.0	1,200	25,500	94,757	1,055,016	1,174,473	1,174,873	927,737,876	790	1,010	127.51	84,237,392	93,807,333

TABLE C.

Location and Size of Pipe Laid in 1893.

Streets.	Cast Iron.					
	16 in.	12 in.	10 in.	8 in.	6 in.	4 in.
Acushnet avenue, from 267 feet north of Tarkiln Hill road north,					275	
Allen street, Borden to 159 feet east of Page street,			907			
Armour street, from 130 feet south of Court street south,					281	
Ashland street, from 422 feet north of Weld to Clark street,				86		
Atlantic street, from 390 feet north of Arnold to Union street,					237	
Belleville avenue, from 178 feet south of Washburn to Kilburn street,						120
Belleville avenue, Holly to Sawyer street,				270		
Belleville avenue, from 97 feet south of Nye to Holly street,			389			
Belleville avenue, 228 feet north of Dean street north,			567			
Beetle street, Belleville avenue to Howard street,					704	
Bonney street, from 206 feet south of Rockland to Thompson street,						163
Bourne street, Fruit street north,					171	
Bowditch street, Sawyer street south,					425	
Bullard street, from 535 feet west of Belleville avenue to Front street,					35	
Campbell street, Purchase street west,					25	
Cedar Grove street, from 185 feet west of County street west,					149	
Clark street, Ashland street west,					110	
Clay street, from 304 feet east of Oak to Ward street,					203	
Coffin avenue, from 63 feet west, to 1337 east of Belleville avenue,					1463	
Coggeshall street, from 149 feet west of County west,					236	
Coggeshall street, Front street east,			1415			
Collins street, from 130 feet east of Cedar street east,					114	
Columbia street, from 403 feet north of Clay to Allen street,					124	
Cottage street, from 496 feet north of Locust to Robeson street,						111
Cotter street, Coggeshall street south,						172

LOCATION AND SIZE OF PIPE.—*Continued.*

STREETS.	CAST IRON.					
	16 in.	12 in.	10 in.	8 in.	6 in.	4 in.
County street, from 3 feet south of Penniman to 59 feet north of Clark street,					88	
County street, from 8 feet south from north line East Cove road to West Cove road,					95	
Cove road, County street west,						383
Cove road, Margin to Shore street,					383	
Elm street, Purchase to Pleasant street,					274	
Elm street, Pleasant street west,						16
Franklin street, Purchase to Pleasant street,						244
Front street, Bullard street south,					88	
Front street, from 233 feet north of Sawyer to Holly street,			22			
Front street, Sawyer to Coggeshall street,			677			
Front street, Coggeshall to Washburn street,		892				
Fruit street, from 26 feet east of Mulberry to Bourne street,					6	
Grand street, Shawmut avenue west,					765	
Grape street, from 518 feet west of Lewis to Rural street,					842	
High street, Purchase street west,					19	
Hillman street, from 85 feet west of County to Summer street,					222	
Hillman street, Purchase to 30 feet east of Pleasant street main,			223			
Holly street, Front street west,					133	
Holly street, Belleville avenue west,			32			
Kempton street, Acushnet avenue to 21 feet east of Pleasant street main,			480			
Maitland street, from 305 feet west of Cedar street west,					162	
Margin street, from 383 feet south of Cove street to Cove road,						40
Maxfield street, from 30 feet east to 19 feet west of Purchase street main,					49	
Maxfield street, from 92 feet west of Ash street west,				245		
Mechanics lane, Purchase street west,					31	
Middle street, Purchase street east,				32		
Middle street, Purchase to 2 feet west of Pleasant street,					282	
Mill street, from 258 feet west of Florence to Hunter street,					96	
Mill street, from 231 feet west of Park to Newton street,					128	
Mitchell street, from 179 ft. north of Coggeshall to Sawyer street,					557	
Morton's Court, Cove street north,						291

LOCATION AND SIZE OF PIPE.—*Continued.*

STREETS.	CAST IRON.					
	16 in.	12 in.	10 in.	8 in.	6 in.	4 in.
Mosher street, from 729 feet west of County street west,						145
Myrtle street, from 296 feet north of Weld street north,					133	
Newton street, Mill street south,					74	
North street, Purchase street east,			28			
North street, Purchase to 30 feet east of Pleasant street main,				223		
Nye street, from 8 feet west of Belleville Avenue west,					170	
Nye street, from 317 feet east of Acushnet avenue east,					121	
Oak street, from 72 feet south of Allen to Allen street,					88	
Pearl street, Purchase to 40 feet east of Pleasant street main,			200			
Purchase street, Union to North street,		1768				
Purchase street, north to 12 feet north of Pearl street,	1916					
Riverside avenue, Coffin avenue north,					187	
Robeson street, from 352 feet west of Cedar street west,					72	
Robeson street, from 142 feet east of Cedar to 431 feet west of Ashland street,					314	
Rural street, Grape street north,					353	
Sawyer street, (north side) Belleville avenue west and connects with main on south side Sawyer street,					170	
Sawyer street, (north side) Belleville avenue east,					806	
Scott street, from 169 feet west of County street west,					156	
Shawmut avenue, from 203 feet north of Locust street north,				99		
Shawmut avenue, Durfee street south,				141		
Shawmut avenue, from 2 ft. south of Grand street north,				246		
Shore street, Cove road south,						285
Short street, from 128 feet south of Allen street south,					193	
Sisson street, Union street south,					160	
Spooner street, from 102 feet west of Lombard street west,						102
Spruce street, from 288 feet north of Parker street north,					61	
Stapleton street, Cove street south,					167	
Tallman street, Belleville avenue west,					29	

LOCATION AND SIZE OF PIPE.—*Continued.*

STREETS.	CAST IRON.					
	16 in.	12 in.	10 in.	8 in.	6 in.	4 in.
Thompson street, Bonney street west,					316	
Union street, Front to Water street,				280		
Union street, Water to Purchase street,		840				
Union street, Purchase to 2 feet east of Sixth street,			496			
Union street, Chancery street west,					120	
Viall street, from 14 feet south of Cove street south,					174	
Washburn street, Front to Acushnet avenue,		857				
Weaver street, from 197 feet west of Dartmouth street west,						131
William street, Water to Purchase street,				843		
William street, Purchase street west,			39			
Willow street, from 163 feet west of Bullock street west,					87	
TOTALS,	1916	4357	5475	2465	12,723	2203

Main Pipe Removed in 1893.

Streets.	Cast Iron.			Cement Lined.			
	10 in.	6 in.	4 in.	10 in.	8 in.	6 in.	4 in.
Campbell street, Purchase street west,			25				
Coggeshall street, Front to 228 feet east of Mitchell street,		988					
Elm street, Purchase to 2 feet west of Pleasant street,							290
Front street, from 120 feet south of Cedar Grove to 109 feet north of Coggeshall street,		724					
High street, Purchase street west,			19				
Hillman street, Purchase to 30 feet east of Pleasant street main,					223		
Kempton street, Purchase to 21 feet east of Pleasant street main,			226				
Maxfield street, from 30 feet east to 19 feet west of Purchase street main,			49				
Middle street, 6 feet east of east line Purchase to 2 feet west of Pleasant street,						314	
North street, Purchase street east,			28				
North street, Purchase to 30 feet east of Pleasant street main,							222
Purchase street, Pearl to Union street,				3663			
Purchase street, 10 feet south to 14 feet north of North line Pearl street,	24						
Union street, Front to Water street,			284				
Union street, Water to 2 feet east of Sixth street,					1333		
Washburn street, Front street to Acushnet avenue,		858					
William street, Water to Purchase st.,			835				
William street, Purchase street west,							39
Totals,	24	2570	1466	3663	1556	314	551

Summary, Pipe Laid and Removed.

Previous to 1893.	30 inch.	24 inch.	20 inch.	16 in.	12 in.	10 inch.	8 inch.	6 inch.	4 inch.
Cement,					6,179	5,722	7,467	8,536	16,421
Cast Iron,	1,879	2,373	11,267	17,595	9,949	20,614	67,522	103,032	83,846
Cast Iron laid during 1893,				1,916	4,357	5,475	2,465	12,723	2,203
Total pipe laid,	1,879	2,373	11,267	19,511	20,485	31,811	77,454	124,291	102,470
Cement removed in 1893,						3,663	1,556	314	551
Cast Iron removed in 1893,						24		2,570	1,466
Total Pipe now in use,	1,879	2,373	11,267	19,511	20,485	28,124	75,898	121,407	100,453

Total length laid in 1893, 29,139 feet, or 5.5188 miles.
Total length removed in 1893, 10,114 feet, or 1.9212 miles.
Total length of pipe in use, December 1, 1893, 381,397 feet, or 72.2343 miles.

TABLE D.

Small Sized Distribution Pipe Laid in 1893.

Street.	Lead.
	1 inch.
Weld street, Ashland street, west,	22

Laid previous to 1893, 5,922 feet.
Laid during 1893, 22 feet.
Total length in use December 1, 1893, 5,944 feet, or 1.1258 miles.

TABLE E.

Location of Stop Gates Set in 1893.

Streets.	Location.	Size.					
		16 in.	12 in.	10 in.	8 in.	6 in.	4 in.
Acushnet avenue, north side Washburn,	On north line Washburn; 15.9 feet east from west line Acushnet avenue,				1		
Acushnet avenue, south side Washburn,	On south line Washburn; 16.1 feet east from west line Acushnet avenue,				1		
Acushnet avenue, south side Kempton,	On south line Kempton, 14 feet east from west line Acushnet avenue,				1		
Allen street, west side Orchard,	On west line Orchard; 16.1 feet south from north line Allen,						1
Allen street, west side Borden,	.5 foot west of west line Borden; 13.7 feet north from south line Allen,			1			
Belleville avenue, north side Sawyer,	On north line Sawyer street; 18 feet east from west line Belleville avenue,				1		
Belleville avenue, north side Kilburn,	On north line Kilburn; 14 feet east from west line Belleville avenue,						1
Beetle street, west side Belleville avenue,	On west line Belleville avenue; 18.3 feet north from south line Beetle,					1	
Beetle street, east side Front,	On east line Front; 18 feet north from south line Beetle,					1	
Beetle street, west side Front,	On west line Front,; 18 feet north from south line Beetle,					1	
Bowditch street, south side Sawyer,	On south line Sawyer; 18 feet east from west line Bowditch,					1	
Campbell street, west side Purchase,	7 feet east from west line Purchase; 14.1 feet north from south line Campbell,					1	
Cedar Grove street, east side Front,	.5 foot east from east line Front; 13.8 feet north from south line Cedar Grove,						1
Cedar Grove street, west side Front,	On west line Front; 14 feet north from south line Cedar Grove,					1	
Clay street, north side Oak,	.6 foot north from north line Oak; 14 feet east from west line Clay,					1	
Coffin avenue, east of Belleville avenue,	286 feet east from east line Belleville avenue (south); 13.3 feet north from south line Coffin avenue,					1	
Coffin avenue, east side Belleville avenue,	1 foot east from east line Belleville avenue; 14 feet north from south line Coffin avenue,					1	

LOCATION OF STOP GATES.—*Continued.*

STREETS.	LOCATION.	SIZE.					
		16 in.	12 in.	10 in.	8 in.	6 in.	4 in.
Coffin avenue, west side Belleville avenue,	On west line Belleville avenue; 14 feet north from south line Coffin avenue,					1	
Coggeshall street, east side Belleville avenue,	On east line Belleville avenue; 17.8 feet north from south line Coffin avenue,			1			
Coggeshall street, west side Belleville avenue,	On west line Belleville avenue; 17.8 feet north from south line Coggeshall,			1			
Coggeshall street, east side Front,	On east line Front; 18.2 feet north from south line Coggeshall,			1			
Coggeshall street, west side Front,	1 foot east from west line Front; 18.4 feet north from south line Coggeshall,					1	
Columbia street, south side Bay,	On south line Bay; 17.8 feet east from west line Columbia,					1	
Columbia street, south side Allen,	On south line Allen; 18.5 feet east from west line Columbia,					1	
Cotter street, south side Coggeshall,	On south line Coggeshall; 14.7 feet east from west line Cotter,						1
Cove road, west side County st.,	On west line County; 18 feet south from north line Cove road,						1
Elm street, west side Purchase,	2.3 feet east from west line Purchase; 14.5 feet north from south line Elm,					1	
Elm street, east side Pleasant,	On east line Pleasant; 14 feet north from south line Elm,					1	
Fifth street, south side Union,	.7 foot north from south line Union; 13.1 feet east from west line Fifth,					1	
Franklin st., west side Purchase,	5.3 feet west from west line Purchase (north); 13.7 feet north from south line Franklin,						1
Front street, south side Sawyer,	1 foot south from south line Sawyer; 18.2 feet east from west line Front,			1			
Front street, north side Coggeshall,	1 foot north from north line Coggeshall; 17.7 feet east from west line Front,			1			
Front street, south side Coggeshall,	On south line Coggeshall, 18 feet east from west line Front,		1				
Front street, north side Washburn,	On north line Washburn; 18 feet east from west line Front (north),		1				
Front street, south side Washburn,	On south line Washburn; 14 feet east from west line Front (south),					1	
Grand street, west side Shawmut avenue,	.5 foot west from west line Shawmut avenue; 13 feet north from south line Grand,					1	
Grape street, east side John street,	543.4 feet west from west line Page; 14 feet north from south line Grape,					1	

LOCATION OF STOP GATES.—*Continued.*

STREETS.	LOCATION.	SIZE.					
		16 in.	12 in.	10 in.	8 in.	6 in.	4 in.
Harrison st., north side Oak,	On north line Oak; 13 feet east from west line Harrison,					1	
High street, west side Purchase,	1 foot west from west line Purchase; 11 feet north from south line High,					1	
Hillman st., west side Purchase,	On west line Purchase; 15.2 feet north from south line Hillman,			1			
Holly street, west side Belleville avenue,	On west line Belleville avenue; 18 feet north from south line Holly,			1			
Holly street, west side Front,	.5 foot east from west line Front; 18 feet north from south line Holly,					1	
Kempton st., east side Purchase,	On east line Purchase; 14 feet south from north line Kempton,			1			
Kempton st., west side Purchase,	6.3 feet east from west line Purchase; 14.6 feet north from south line Kempton,			1			
Maxfield st., east side Purchase,	On east line Purchase; 13.5 feet north from south line Maxfield,					1	
Maxfield street, west side Purchase.	2.5 feet west from west line Purchase; 13.8 feet north from south line Maxfield,					1	
Mechanics lane, west side Purchase,	2 feet east from west line Purchase; 7 feet north from south line Mechanics lane,					1	
Middle street, east side Purchase,	1 foot east from east line Purchase; 14 feet north from south line Middle,				1		
Middle street, west side Purchase,	On West line Purchase; 14 feet north from south line Middle,					1	
Mill street, east side Hunter,	On east line Hunter; 14.1 feet north from south line Mill,					1	
Mitchell st., north side Coggeshall,	1 foot south from north line Coggeshall; 14.2 feet east from west line Mitchell,					1	
Mitchell st., south side Sawyer,	On south line Sawyer; 14 feet east from west line Mitchell,					1	
Morton's court, north side Cove road,	On north line Cove; 12 feet east from west line Morton's court,						1
North street, east side Purchase,	1.7 feet east from east line Purchase; 13.8 feet north from south line North,			1			
North street, west side Purchase,	.6 foot west from west line Purchase; 13.1 feet north from south line North,				1		
Oak street, south side Allen,	On south line Allen; 18 feet east from west line Oak,					1	

LOCATION OF STOP GATES.—*Continued.*

STREETS.	LOCATION.	SIZE.					
		16 in.	12 in.	10 in.	8 in.	6 in.	4 in.
Pearl street, west side Purchase,	On west line Purchase; 14 feet north from south line Pearl,			1			
Purchase st., north side Union,	3 feet north from north line Union; 15.3 feet east from west line Purchase,		1				
Purchase st., north side Elm,	1 foot north from north line Elm; 15.2 feet east from west line Purchase,		1				
Purchase st., south side Mill,	On south line Mill; 16 feet east from west line Purchase,		1				
Purchase street, at hydrant,	1 foot east from west line Purchase; 11.5 feet south from north line Mill,					1	
Purchase st., south side Maxfield,	On south line Maxfield; 13.3 feet east from west line Purchase,	1					
Purchase street, at hydrant,	347.8 ft. south from south line Campbell; 12 feet east from west line Purchase,					1	
Purchase st., north side Campbell,	1.8 feet south from north line Campbell; 16.6 feet east from west line Purchase,	1					
Purchase st., north side Pearl,	1 foot north from north line Pearl; 16.4 feet east from west line Purchase,	1					
Sawyer street, east side Belleville avenue,	On east line Belleville avenue(north); 15 feet south from north line Sawyer,					1	
Shawmut avenue, south side Durfee,	On south line Durfee; 14 feet east from west line Shawmut avenue,				1		
Shawmut avenue, south side Grand,	1.2 feet north from south line Grand; 13.7 feet east from west line Shawmut avenue,				1		
Tallman st., west side Belleville avenue,	On west line Belleville avenue; 18 feet north from south line Tallman,					1	
Thompson street, west side Bonney,	On west line Bonney; 14 feet north from south line Thompson,					1	
Union street, east side Water,	On east line Water; 16 feet north from south line Union,				1		
Union street, west side Water,	8 feet east from west line Water; 16 feet north from south line Union,	1					
Union street, at hydrant,	1.5 feet west from west line Water; 10 feet north from south line Union,					1	
Union street, east side First,	On east line First; 16 feet north from south line Union,	1					
Union street, at hydrant,	5 feet west from west line First; 12.3 feet north from south line Union,					1	

LOCATION OF STOP GATES.—*Concluded.*

STREETS,	LOCATION.	SIZE					
		16 in.	12 in.	10 in.	8 in.	6 in.	4 in.
Union street, at hydrant,	4 feet west from west line Second; 11.3 feet north from south line Union,					1	
Union street, at hydrant,	4 feet west from west line Acushnet Avenue; 11.2 feet north from south line Union,					1	
Union street, east side Purchase,	On east line Purchase; 16 feet north from south line Union,		1				
Union street, west side Purchase,	6 feet west from west line Purchase; 15 ft. north from south line Union,			1			
Ward street, south side Bay,	.7 foot south from south line Bay; 14 feet east from west line Ward,					1	
Washburn street, east side Front,	1 foot east from east line Front; 14 feet north from south line Washburn,						1
Washburn street, east side Acushnet avenue,	7 feet west from east line Acushnet avenue; 14 feet north from south line Washburn,		1				
Water street, south side Union,	1 foot south from south line Union; 13.8 feet east from west line Water,			1			
Water street, north side Union,	On north line Union; 15.3 feet east from west line Water,			1			
William st., west side Water,	.6 foot west from west line Water; 14.5 feet north from south line William,				1		
William st., west side Second,	On west line Second; 14 feet north from south line William,				1		
William street, east side Purchase,	On east line Purchase; 13 feet north from south line William,				1		
William street, west side Purchase,	On west line Purchase; 15.3 feet north from south line William,			1			
William street, at hydrant,	11.5 feet west from west line Purchase; 12.5 feet north from south line William,					1	
	TOTALS,	3	9	16	12	41	8

REMOVED.

Campbell street, west side Purchase,	4-inch.
Coggeshall street, east side Belleville avenue,	6 "
Elm street, east side Purchase,	4 "
Elm street, west side Purchase,	4 "
Front street, north side Coggeshall,	6 "

Front street, south side Coggeshall,	6-inch.
High street, west side Purchase,	4 "
Kempton street, west side Purchase,	4 "
Maxfield street, east side Purchase,	4 "
Maxfield street, west side Purchase,	4 "
Middle street, east side Purchase,	6 "
Middle street, west side Purchase,	6 "
Purchase street, north side Middle,	10 "
Purchase street, south side Hillman,	10 "
Purchase street, south side Willis,	10 "
Union street, east side Water,	4 "
Union street, east side Purchase,	8 "
Union street, west side Fourth,	8 "
Washburn street, west side Front,	6 "
William street, west side Water,	4 "
William street, east side Second,	4 "
William street, east side Purchase,	4 "
William street, west side Purchase,	4 "

Number of stop gates set in 1893,	89
Number removed in 1893,	23
	66
Number in use at date of last report,	742
Number in use December 1, 1893,	808

TABLE F.

Private Stop Gates Set in 1893.

Streets.	Location.	Size.		
		8 in.	6 in.	2 in.
Bolton road, at Rotch Mill No. 2,	34.5 feet south from south line Mill No. 2; 33 feet west from west line mill,		1	
Bolton road, at Rotch Mill No. 2,	36.2 feet south from south line Mill No. 2; 33 feet west from west line mill,		1	
Coggeshall street, at Bristol Mill,	20 feet east from east line mill; 11 feet north from south line Coggeshall,	1		
Coggeshall street, at Bristol Mill,	22.5 feet east from east line mill; 11 feet north from south line Coggeshall,		1	
Coggeshall street, at Columbia Mill,	25.8 feet east from east line office; 11.8 feet south from north line Coggeshall,	1		
Dover street, at Standish Bourne's,	46.2 ft. west from Second; 6.2 ft. west from west line doorway; 3.8 feet north from south line Dover,			1
Front street, at Wamsutta Mill,	389 feet north from Logan; 9.3 feet east from west line Front,		1	
Front street, at Grinnell Mill,	67.4 feet north of Logan; 81 feet south from south line mill; 9.4 feet west from east line Front,	1		
Prospect street, at Mt. Washington Glass Co.,	205 feet south of Howland; 35 feet south from north line cooper shop; 9.5 feet west from east line Prospect,		1	
	Totals,	3	5	1

Number set during 1893,	9
Number in use at date of last report,	162
Number in use December 1, 1893,	171

TABLE G.

Waste Gates Set in 1893.

Streets.	Location.	Size. 4 in.
Cedar Grove street at Front,	22 feet east from west line Front; 16.5 feet north from south line Cedar Grove,	1
Coggeshall st., east of Mitchell,	656.9 feet east from east line Mitchell; 23.8 feet north from south line Coggeshall,	1
Purchase street at Mill,	7.7 feet north from south line Mill; 17.5 east from west line Purchase,	1
Purchase street at Maxfield,	6.3 feet north from south line Maxfield; 15 feet east from west line Purchase,	1
Purchase street at Campbell,	13 feet south from north line Campbell; 24 feet east from west line Purchase,	1
Purchase street at Pearl,	12.4 feet south from north line Pearl; 27.2 ft. east from west line Purchase,	1
Union street at Purchase,	8.7 feet west from east line Purchase; 19.7 ft. north from south line Union,	1
Union st. at First,	4.3 feet west from east line First; 20.2 feet north from south line Union,	1
Washburn st. west of Front,	199.5 feet west of Front (south); 17.7 feet north from south line Washburn,	1
	Total,	9

REMOVED.

Hillman street at Purchase,	1½ inch.
Middle street at Purchase,	1½ inch.
Purchase street at Hillman,	1½ inch.
Purchase street at Willis,	1½ inch.
Union street at Fourth,	1½ inch.
William street at Purchase,	1½ inch.
Willis street at Purchase,	1½ inch.
Number set in 1893,	9
Number removed in 1893,	7
To be added to number last reported,	2
Number in use at date of last report,	72
Total number in use December 1, 1893,	74

TABLE H.

Location of Hydrants Set in 1893.

Acushnet avenue, west side, 542 feet north of Tarkiln Hill road.
Armour street, southwest corner Union.
Ash street, northwest corner Middle.
Ashland street, southwest corner Clark.
Atlantic street, southwest corner Union.
Belleville avenue, southwest corner Coffin avenue.
Belleville avenue, west side, 141 feet north of Phillips avenue.
Beetle street, southeast corner Front.
Bolton road, west side, south of Rotch Mill No. 2.
Bolton road, west side, north of Rotch Mill No. 2.
Bourne street, west side, 144 feet north of Fruit.
Bowditch street, west side, 406 feet south of Sawyer.
Campbell street, southwest corner Purchase.
Clay street, northwest corner Columbia.
Coffin avenue, south side, 1,337 feet east of Belleville avenue.
Coggeshall street, south side, 654 feet east of Mitchell.
Coggeshall street, south side, 498 feet east of Mitchell.
Coggeshall street, south side, 334 feet east of Mitchell.
Coggeshall street, north side, 148 feet east of Mitchell.
Coggeshall street, south side, 384 feet west of County.
Collins street, southeast corner Glover.
Columbia street, southwest corner Allen.
Cove road, southwest corner Shore street.
Cove road, north side, 365 feet west of County.
Elm street, southwest corner Purchase.
Fifth street, southwest corner Union.
Fourth street, southwest corner Union. Flush.
Grand street, south side, 750 feet west of Shawmut avenue.
Grape street, southwest corner Small.
Grape street, southwest corner Devoll.
High street, southwest corner Purchase.
Hillman street, southwest corner Purchase.
Holly street, southwest corner Belleville avenue.
Maitland street, southwest corner Cedar.
Maitland street, south side, 101 feet west of Richmond.
Maxfield street, southwest corner Purchase.
Maxfield street, south side, 93 feet east of Chancery.
Mechanics lane, northwest corner Purchase.
Middle street, southwest corner Purchase.
Mill street, northwest corner Purchase.

Mill street, southeast corner Newton.
Mitchell street, northwest corner Coggeshall.
Mitchell street, west side, 345 feet south of Sawyer.
Mitchell street, southwest corner Sawyer.
Morton's court, west side, 258 feet north of Cove.
Myrtle street, west side, 35 feet south of Clark.
North street, southwest corner Purchase.
Oak street, southwest corner Allen.
Pearl street, southwest corner Purchase.
Purchase street, west side, 348 feet south of Campbell.
Riverside avenue, west side, 155 feet north of Coffin avenue.
Robeson street, southeast corner Cottage.
Robeson street, south side, 424 feet west of Cedar.
Rural street, southwest corner Allen.
Sawyer street, north side, 750 feet east of Belleville avenue.
Scott street, south side, 325 feet west of County.
Shawmut avenue, west side, 32 feet north of Maitland.
Shawmut avenue, west side, 127 feet south of Durfee.
Shawmut avenue, west side, 203 feet north of Grand street.
Shore street, west side, 264 feet south of Cove road.
Short street, west side, 321 feet south of Allen.
Spruce street, west side, 347 feet north of Parker.
Tallman street, southwest corner Bellville avenue.
Thompson street, south side, 302 feet west of Bonney.
Union street, southwest corner Front.
Union street, southwest corner Water.
Union street, southwest corner First.
Union street, southwest corner Second.
Union street, southwest corner Acushnet avenue.
Viall street, west side, 188 feet south of Cove.
Ward street, southwest corner Bay.
Washburn street, southeast corner Acushnet avenue.
Washburn street, south side, 228 feet west of Front.
William street, southwest corner Bethel.
William street, southwest corner Second.
William street, southwest corner Purchase.
Willis street, southwest corner Purchase.
Willow street, southeast corner Shawmut avenue.

(The entire list, except Fourth street southwest corner Union, post hydrants.)

Taken Up.

Acushnet avenue, west side, 267 feet north of Tarkiln Hill road.	Post.
Armour street, west side, 130 feet south of Court.	"
Ash street, northwest corner Middle.	Flush.
Ashland street, west side, 71 feet south of Clark.	Post.
Atlantic street, west side, 390 feet north of Arnold.	"
Belleville avenue, west side, 228 feet north of Dean.	"
Coffin avenue, south side, 63 feet west of Belleville avenue.	"
Coggeshall street, south side, 149 feet west of County.	"
Coggeshall street, south side, 227.4 feet east of Mitchell.	"
Collins street, south side, 72.4 feet west of Glover.	"
Columbia street, west side, 110 feet south of Allen.	"
Grape street, south side, 517.5 feet west of Lewis.	"
Maitland street, south side, 305 feet west of Cedar.	"
Myrtle street, west side, 294.5 feet north of Weld.	"
Oak street, west side, 72 feet south of Allen.	"
Purchase street, west side, at Central engine house.	"
Purchase street, northwest corner Middle.	Flush.
Purchase street, southwest corner Mill.	"
Purchase street, southwest corner Hillman.	Double.
Purchase street, west side, 343 feet north of Maxfield.	"
Purchase street, southwest corner Campbell.	Flush.
Purchase street, southwest corner Pearl.	Double.
Robeson street, south side, 92 feet east of Cottage.	Post.
Robeson street, south side, 352 feet west of Cedar.	"
Scott street, south side, 169 feet west of County.	"
Shawmut avenue, west side, 38.7 feet north of Tilton.	"
Short street, west side, 128 feet south of Allen.	"
Union street, southwest corner Water.	Double.
Union street, southeast corner Second.	Flush.
Union street, southwest corner Acushnet avenue.	Double.
Ward street, west side, 62 feet south of Bay.	Post.
Washburn street, southeast corner Acushnet avenue.	Flush.
Washburn street, south side, 228 feet west of Front.	"
William street, southwest corner Bethel.	"
Willow street, south side, 163 feet west of Bullock.	Post.

Total number set during 1893,	78
Total number removed during 1893,	35
To be added to number last reported,	43
Number in use at date of last report,	542
Total number in use Dec. 1, 1893,	585

TABLE I.

Statement of Work Done by the Service Department for the Year Ending December 1, 1893.

Kind and Size.	Number of Services.	Length on Taker.	Length on City.
Lead pipe ½ inch, heavy,	121	1,550	2,798
Lead pipe ⅝ inch, heavy,	95	969.5	2,102
Lead pipe ⅝ inch, light,	84	912.5	1,761
Lead pipe ¾ inch, heavy,	11	450.5	243
Lead pipe ¾ inch, light,	71	1,151	1,474
Lead pipe 1 inch, heavy,	3	37.5	38
Lead pipe 1 inch, light,	5	301	91
Iron pipe 6 inch,	1	69	
Iron pipe 3 inch,	1	50	
Wrought iron 2 inch,	1	83	
Cast-iron pipe 8—6—4 inch,	7		
Totals,	400	5,574	8,507

One ¾ inch iron service has been taken out and replaced with ⅝ inch light lead.

One ⅝ inch light lead has been taken out and replaced with ¾ inch light lead.

Two ⅝ inch iron services have been taken out and replaced with ⅝ inch heavy lead.

One extension to service previously laid has been made, using 19½ feet of ¾ inch light lead pipe.

Six connections to services previously laid have been made by owners.

One 3 inch, one 2 inch iron, and one ⅝ inch heavy lead services have been discontinued.

Length of service pipe laid during the year, 14,081 ft., $= 2\frac{6668}{10000}$ miles.

Total number of services in use December 1, 1893, 7,531.

TABLE J.

Meters.

Location.	Pattern.	Size.
Acushnet Coöperative Association, 213 Acushnet avenue,	Union rotary,	1 inch.
Acushnet Mill No. 1,	Union rotary,	6 "
Acushnet Mill No. 2,	Union rotary,	4 "
Allen, John S., 102 State street,	Crown,	5/8 "
Allen, Timothy C., 188 Grinnell street,	Crown,	5/8 "
Allen, T. F., 185 Pleasant street,	Hersey,	5/8 "
Bacon, Annie E., 4 Lincoln street,	Crown,	3/4 "
Baker, Michael A., 82 Chestnut street,	Crown,	3/4 "
Barlow, James, 38 Winsor street,	Hersey,	5/8 "
Barrett, John R., 2 Richmond street,	Hersey,	3/4 "
Bates, J. W., Kempton and Cottage streets,	Crown,	3/4 "
Bennett Mill,	Union rotary,	6 "
Blackler, Mrs. A. M., 111 Summer street,	Union rotary,	3/4 "
Bosworth, William, 435 Cottage street,	Hersey,	5/8 "
Bourne, Standish, 47 North Second street,	Union rotary,	2 "
Boivin, Nazaire, 7 Hicks street,	Union rotary,	1 1/2 "
Brightman, George A., 35 Smith street,	Crown,	1/2 "
Brightman, Nathan P., 107 Elm street,	Crown,	3/4 "
Briggs, Daniel D., 43 Bedford street,	Crown,	5/8 "
Briggs, George E., Dartmouth street,	Union rotary,	1 1/2 "
Briggs, Stephen H., 351 County street,	Hersey,	5/8 "
Bristol Manufacturing Co., Coggeshall street,	Hersey,	4 "
Brownell, Albion T., 46 Fifth street,	Crown,	5/8 "
Brownell, Charles H., Florence street,	Crown,	5/8 "
Buffington, Arthur E., 27 Crapo Street,	Crown,	1/2 "
Butler, William P., 797 South Water street,	Hersey,	5/8 "
Caldwell, S. C., 365 Pleasant street,	Union rotary,	5/8 "
Caldwell, S. C., 367 Pleasant street,	Crown,	5/8 "
Central Union Association, 5 North Sixth st.,	Thomson,	1 1/2 "
Central wharf,	Crown,	2 "
Cemetery, Rural, Dartmouth street,	Crown,	2 "
Cemetery, Oak Grove, Parker street,	Crown,	3 "
Chadwick, Edward E., William street,	Crown,	3 "
Chappell, William H., 21 Willis street,	Hersey,	5/8 "
Childs, A. F., 6 Wing street,	Hersey,	5/8 "
City Manufacturing Co., Grinnell street,	Union rotary,	6 "
Columbia Spinning Co., Coggeshall street,	Hersey,	6 "
Commercial wharf,	Union rotary,	3 "
Davis, Abner T., estate, 34 Fifth street,	Union rotary,	5/8 "
Dawson, Benjamin, Purchase and Hazard sts.,	Crown,	1 1/2 "
Dawson, Benjamin, Hazard street,	Hersey,	1 "
Dowden, James, 35 Mill street,	Union rotary,	3/4 "
Duff, David & Son, Central wharf,	Crown,	1 "
Duff, David & Son, Fish Island,	Union rotary,	1 1/2 "
Eldridge, Washington A., 56 Mill street,	Crown,	5/8 "

METERS.— *Continued.*

Location.	Pattern.	Size.
Electric Light Co., Middle street,	Union rotary,	2 inch.
Elliot, John D., 106 Fourth street,	Hersey,	5/8 "
Ennis, John W., 161 Grinnell street,	Hersey,	5/8 "
Fish, L. C., 59 Sycamore street,	Crown,	3/4 "
Folger, David B., 140 Union street,	Thomson,	1 "
Folsom, Simeon, Middle and Purchase streets,	Union rotary,	1 "
Francis, Joseph F., County street,	Crown,	5/8 "
Garfield & Proctor Coal Co., foot Hillman st.,	Hersey,	1 "
Gifford, T. J., Ashland and Austin streets,	Crown,	5/8 "
Gifford, T. J., 34 Hillman street,	Crown,	3/4 "
Gifford, T. J., 32 Hillman street,	Crown,	5/8 "
Grinnell Mill, Kilburn street,	Union rotary,	4 "
Hall, S. M., estate, 327 Pleasant street,	Crown,	3/4 "
Hammond, Henry F., 79 Mill street,	Crown,	3/4 "
Haskell, Edward S., South Sixth street,	Hersey,	3/4 "
Haskell & Tripp, William street,	Union rotary,	2 "
Hastings, Geo., Hastings Bldg., Purchase st.,	Crown,	1 "
Hathaway Manufacturing Co., Mill No. 1,	Union rotary,	4 "
Hathaway Manufacturing Co., Mill No. 2,	Gem,	4 "
Hathaway, Jas. C., Florence and Kempton sts.,	Crown,	3/4 "
Hayes, N. P., William street,	Crown,	1 "
Hazard's wharf,	Union rotary,	2 "
Holmes, David W., 81 Thomas street,	Hersey,	5/8 "
Howland, George, wharf,	Ball & Fitts,	2 "
Howland, Paul, estate, 91 State street,	Union rotary,	3/4 "
Howland Mill No. 1,	Union rotary,	6 "
Howland Mill No. 2,	Union rotary,	6 "
Hutchinson, H. S., 202 Union street,	Hersey,	3/4 "
Jay, James A., Second street,	Hersey,	1 "
Jenney, Susan A., 69 Chestnut street,	Hersey,	3/4 "
Kane, D. J. & Bro., 134 Union street,	Crown,	5/8 "
Keene, Charles F., Centre street,	Hersey,	2 "
Keene, Leonard, Jr., Parker and Chestnut sts.,	Crown,	3/4 "
Kirby, Tillinghast, 350 Cottage street,	Crown,	3/4 "
Knowles, John P., Jr., 485 County street,	Crown,	3/4 "
Knowles, John P., Jr., 108 Willis street,	Hersey,	3/4 "
Lawrence, Edward I., west side Emerson st.	Hersey,	5/8 "
Lawrence, Thomas W., 117 Willis street,	Hersey,	3/4 "
Lawrence, John H., 66 Parker street,	Hersey,	5/8 "
Lawton, James M., Jr., 80 State street,	Crown,	3/4 "
Lewis, E. R., 321 Union street,	Crown,	1 "
Longfield, Joseph S., 52 Shawmut avenue,	Crown,	5/8 "
Lowe, John H., 931 Acushnet avenue,	Crown,	5/8 "
Lowell, Clarence, 40 Fifth street,	Crown,	5/8 "
Lythgoe, David, estate, 322 Pleasant street,	Hersey,	5/8 "
Macaulay, Walter S., 132 Division street,	Crown,	5/8 "
Macomber, William B., 74 State street,	Hersey,	5/8 "
Macy, J. Roland, 186 Union street,	Crown,	1 "
Marquand, James, 35 Maxfield street,	Crown,	5/8 "

METERS.— *Continued.*

Location.	Pattern.	Size.
Merrill's wharf,	Union rotary,	2 inch.
Mills, William J., south side Austin street,	Hersey,	5/8 "
Mills, William J., south side Austin street,	Hersey,	5/8 "
Monte Pio Coöperative Association, Acushnet avenue and Howland street,	Thomson,	1 "
Mosher, C. E. E. and H. C. W., 92 High st.,	Crown,	3/4 "
Moynan & Co., Union street,	Union rotary,	3 "
Mt. Washington Glass Works, Prospect street,	Union rotary,	2 "
Murkland, James H., 35 Fifth street,	Hersey,	5/8 "
Murkland, James H., 55 Walnut street,	Hersey,	5/8 "
Myrick, A. G., 101 Middle street,	Hersey,	5/8 "
Nash, Thos. N., Acushnet ave. and Nash road,	Crown,	1/2 "
New Bedford and Martha's Vineyard Steamboat Company's wharf,	Crown,	3 "
New Bedford 5c. Savings Bank, Purchase st.,	Hersey,	1 "
New Bedford Gas Light Co., Coffin street,	Union rotary,	3 "
New Bedford Gas Light Co., South Water st.,	Hersey,	1 "
New Bedford Gas Light Co., South Water st.,	Hersey,	2 "
New Bedford Manufacturing Co.,	Union rotary,	6 "
New Bedford Paper Co., Hastings' wharf,	Hersey,	2 "
New Bedford Manufacturing Co., North street,	Union rotary,	6 "
New Bedford Yacht Club, Pope's Island,	Ball & Fitts,	1 "
Nichols, Leander P., 49 North street,	Union rotary,	3/4 "
Nye, William F., Fish Island,	Crown,	1 1/2 "
N. Y., N. H. & Hartford R. R. Co., Logan st.,	Crown,	3 "
N. Y., N. H. & Hartford R. R. Co., foot of Pearl street,	Crown,	1 1/2 "
O'Brien, Michael, 97 Grinnell street,	Crown,	1/2 "
Oneko Mills, Purchase street,	Union rotary,	6 "
Pairpoint Manufacturing Co., Prospect street,	Union rotary,	3 "
Parker, Geo. H., Parker and Chestnut streets,	Thomson,	3/4 "
Perry, E. S., Maxfield and Summer streets,	Crown,	3/4 "
Perry, J. W., 62 Thomas street,	Crown,	3/4 "
Perry, Henry C., 671 County street,	Crown,	3/4 "
Pelan, Thomas, 278 Kempton street,	Crown,	3/4 "
P. & R. Coal and Iron Co.'s wharf,	Crown,	3 "
Pickens, George, 149 Summer street,	Union rotary,	3/4 "
Pierce, Frank E., 87 Mill street,	Crown,	3/4 "
Pierce Mill, Belleville avenue,	Hersey,	4 "
Pope's Island Manufact'ing Co., Pope's Island,	Crown,	1 "
Potter, William F. & Co., Front Street,	Crown,	1 "
Potomska Mills, Potomska street,	Union rotary,	6 "
Price, Alexander, 110 County street,	Crown,	5/8 "
Quimby, Ezra, 135 Summer street,	Crown,	3/4 "
Robeson Building, William street,	Crown,	1/2 "
Rotch Spinning Corporation, Bolton road, Mill No. 1,	Hersey,	6 "
Rotch Spinning Corporation, Bolton road, Mill No. 2,	Union rotary,	6 "

METERS.— *Continued.*

Location.	Pattern.	Size.
Rotch's wharf,	Union rotary,	2 inch.
Russell, Charles G., 343 Purchase street,	Crown,	5/8 "
Sawtelle, Frank C., 315 Pleasant street,	Hersey,	5/8 "
Shaw, Dr. J.C., 23 South Sixth street,	Crown,	1 "
Sherman, I. C. & Son, 76 Union street,	Union rotary,	2 "
Sherman, James L., 43 Mill street,	Crown,	3/4 "
Sisson, Joseph S., Allen and Cottage streets,	Thomson,	1 "
Smalley, Orrick, Jr., 69 South Sixth street,	Crown,	5/8 "
Smith, Ellen M., 73 Bedford street,	Crown,	5/8 "
Smith Bros., Purchase and Linden streets,	Crown,	3/4 "
Smith, Esther L., 120 Maxfield street,	Hersey,	3/4 "
Spare, J. V., Purchase street,	Hersey,	1 "
Spencer, Hartley, 18 Parker street,	Crown,	5/8 "
Stanton, A. G., 198 Grinnell street,	Crown,	3/4 "
Sturtevant, Levi H., 36 North street,	Crown,	3/4 "
Swan, Carrie B., 110 Fourth street,	Hersey,	5/8 "
Taber's wharf,	Crown,	2 "
Thornton, Alfred, 256 Union street,	Crown,	5/8 "
Tillinghast, Theodore F., Hicks street,	Crown,	5/8 "
Tripp, George H. W., 45 Bedford street,	Crown,	5/8 "
Union Street Railway Co., Parker's wharf,	Crown,	3 "
Vaughan, W. C., Jr., 323 Purchase street,	Crown,	5/8 "
Walker, William, County and Campbell sts.,	Crown,	3/4 "
Wamsutta Mills, Nos. 1, 2, and 3,	Union rotary,	6 "
Wamsutta Mills, Nos. 4 and 5,	Union rotary,	8 "
Wamsutta Mill No. 6,	Union rotary,	6 "
Washburn, A. R., 338 Cedar street,	Crown,	3/4 "
Webster, Dr. Helen M., Purchase and Mill sts.,	Hersey,	1 "
Weeks, Henry T., east side Palmer street,	Crown,	3/4 "
Whittaker, Edwin, 138 State street,	Hersey,	5/8 "
Whittaker, Edwin, 140 State street,	Hersey,	5/8 "
Wilde, William T., 50 Katharine street,	Hersey,	5/8 "
Wood, Richmond B., 59 Foster street,	Union rotary,	3/4 "
Y. M. P. T. & B. Society, 69 Elm street,	Hersey,	5/8 "

Number of meters in use December 1, ... 172.

TABLE K.

Motors.

Location.	Used for	Size of Supply Pipe.
Acushnet Coöperative Association, 213 Acushnet avenue,	Grind'g coffee,	1 inch.
Baptist Church, William street,	Blowing organ,	2½ "
Boivin, Nazaire, 7 Hicks street,	Circular saw,	2 "
Bourne, Standish, 47 North Second street,	Elevator,	2 "
Briggs, George E., Dartmouth street,	Lathe,	2 "
Central Union Store, 5 North Sixth street,	Grind'g coffee,	1¼ "
Chadwick, Edward E., William street,	Sausage cut'ng,	2 "
Cummings, C. S. & B., 102 William street,	Grind'g coffee,	2 "
Dawson, Ben., Purchase and Hazard streets,	Elevator,	1½ "
Driscoll, Church & Hall, Union and First sts.,	Elevator,	3 "
Folger, David B., 140 Union street,	Grind'g coffee,	1 "
Haskell & Tripp, William street,	Elevator,	3 "
Hayes, N. P., William street,	Elevator,	1 "
Jay, James A., 13 South Second street,	Clip'g machine,	1 "
Kane, D. J. & Bro., Union street,	Book bindery,	2 "
Keen, Charles F., Centre street,	Wood working machinery,	2 "
Macy, J. Roland, 186 Union street,	Grind'g coffee,	1 "
Monte Pio Coöperative Association, Acushnet avenue and Howland street,	Grind'g coffee,	2 "
Moynan & Co., Union street,	Elevator,	3 "
Nesbett, F. B., 160 Purchase street,	Dentist,	⅝ "
N. B. Gas Light Co., South Water street,	Elevator,	2 "
North Congregational Church, Purchase and Elm streets,	Blowing organ,	3 "
Potter, W. F. & Co., Front and Union streets,	Grind'g coffee,	1 "
Sherman, I. C. & Son, 76 Union street,	Elevator,	3 "
St. John Baptist Church, Fifth street,	Blowing organ,	2 "
St. Lawrence Church, County and Hillman streets,	Blowing organ,	3 "
Sisson, Joseph S., Allen and Cottage streets,	Grind'g coffee,	2 "
Spare, J. V., Purchase street,	Elevator,	1 "
Trinitarian Church, Fourth and School streets,	Blowing organ,	3 "
Unitarian Church, Union and Eighth streets,	Blowing organ,	3 "

Total number of motors in use, December 1, ... 30.

TABLE L.

Watering Cart Hydrants.

Acushnet avenue, west side, 4.5 feet north from north line South Belleville road.
Acushnet avenue, west side, 13.5 feet north from north line North Belleville road.
Acushnet avenue, west side, 11.9 feet south from south line Tarkiln Hill road.
Allen street, north side, 154 feet east of Page.
Bedford street, south side, 86 feet west of Fourth.
Campbell street, south side, 87 feet west of Purchase.
Cedar Grove street, south side, 18 feet west of Acushnet avenue.
Coffin avenue, south side, 16.5 feet west of Acushnet avenue.
Commercial street, south side, 20.2 feet east of Water.
County street, west side, 32.2 feet north of Allen.
Court street, north side, 15 feet east of Ash.
Dartmouth street, east side, 13 feet south of Oak.
Elm street, south side, 57.4 feet west of Purchase.
First street, west side, 118 feet south of School.
First street, west side, 28 feet south of Grinnell.
Grinnell street, south side, 31 feet east of County.
Hawthorn street, south side, 17 feet east of Cottage.
Hawthorn street, head of Tremont.
Hazard street, south side, 21 feet west of Purchase.
Kempton street, south side, 72 feet west of County.
Kempton street, south side, 102 feet east of Newton.
Kempton street, south side, 16 feet east of Rockdale avenue.
Linden street, south side, 30 feet west of Purchase.
Locust street, south side, 25 feet west of County.
Madison street, south side, 17 feet east of Fourth.
Madison street, south side, 39 feet west of County.
Mill street, south side, 9 feet west of Purchase.
Middle Point road, south side, 58 feet east of French avenue.
Mt. Vernon street, south side, 14 feet west of Mt. Pleasant.
Reynolds street, west side, 8 feet north of Linden.
Robeson street, south side, 38 feet west of Cedar.
Smith street, south side, 53 feet east of Park.
Spring street, south side, 49 feet west of Sixth.
Summer street, west side, 4 feet north of Hillman.
Sycamore street, south side, 77 feet west of County.
Thompson street, south side, 72 feet west of Warwick.
Union street, south side, 65 feet west of County.

Water street, west side, 6 feet south of Blackmer.
William street, south side, 27 feet east of Second.
Willis street, south side, 7½ feet east of Acushnet avenue.

Number now in use, 40.

TABLE M.

Location of Hydrants.

	Pressure in lbs.
Acushnet avenue, west side, 542 feet north of Tarkiln Hill road. Post.	54
Acushnet avenue, southwest corner of Tarkiln Hill road. Post.	55
Acushnet avenue, west side, south of Tarkiln Hill road 500 feet. Post.	54
Acushnet avenue, west side, south of Tarkiln Hill road 997 feet. Post.	53
Acushnet avenue, west side, north of North Belleville road 600 feet. Post.	53
Acushnet avenue, west side, north of North Belleville road 6 feet. Post.	54
Acushnet avenue, west side, south of North Belleville road 601 feet. Post.	55
Acushnet avenue, west side, north of Shaw 610 feet. Post.	51
Acushnet avenue, northwest corner of Shaw. Post.	47
Acushnet avenue, west side, north of South Belleville road 603½ feet. Post.	45
Acushnet avenue, west side, head of South Belleville road. Post.	42
Acushnet avenue, northwest corner of Nash road. Post.	40
Acushnet avenue, northwest corner of Hathaway avenue. Post.	40
Acushnet avenue, northwest corner of Davis. Post.	41
Acushnet avenue, southwest corner of Phillips avenue. Post.	39
Acushnet avenue, southwest corner of Dean. Post.	48
Acushnet avenue, west side, north of Sawyer 574½ feet. Post.	53
Acushnet avenue, southwest corner of Coggeshall. Post.	56
Acushnet avenue, southwest corner of Cedar Grove. Post.	54
Acushnet avenue, west side, south of Logan 335 feet. Post.	60
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County street, southwest corner of Maxfield. 25
County street, southwest corner of North. 21
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County street, southwest corner of Morgan. Post. 22
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Field street, west side, 351 feet south of Babbitt. Post. 37
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Fifth street, southwest corner of School. Post. 45
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Fifth street, northwest corner of Wing. Post. 59
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Kempton street, southwest corner of Emerson. 26
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Kempton street, southeast corner of Jenney. 26
Kempton street, south side, west of Hunter 50 feet. Post. 21
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Larch street, south side, 129 feet east of Hemlock. Post. 51
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Lincoln street, west side, south of Union 171 feet. 23
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Linden street, south side, 67½ feet west of Reynolds. Post. 24
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Maxfield street, southwest corner of Purchase. Post. 46
Maxfield street, southwest corner of Pleasant. Post. 38
Maxfield street, southeast corner of Chestnut. 19
Maxfield street, southeast corner of Spruce. 21
Maxfield street, southwest corner of Ash. Post. 22
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Middle street, southwest corner of Purchase. Post. 42
Middle street, southeast corner of Sixth. Double. 36
Middle street, south side, east of Cedar 371 feet. 32
Middle street, southeast corner of Chancery. 29
Mill street, northwest corner of Purchase. Post. 43
Mill street, south side, west of Hill 191 feet. 25
Mill street, south side, west of Ash 45 feet. 25
Mill street, southeast corner of Newton. Post. 26
Mill street, south side, 138 feet west of Hunter. Post. 18
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Myrtle street, west side, 35 feet south of Clark. Post. 23
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North street, southwest corner of Purchase. Post. 44
North street, northwest corner of Pleasant. Post. 35
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North street, southwest corner of Park. Post. 29
North street, southeast corner of Newton. Post. 32
North street, southwest corner of Hunter. Post. 22
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Oak street, northwest corner of Grape. Post. 41
Oak street, southwest corner of Allen. Post. 38
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Pleasant street, southwest corner of Market. 37
Pleasant street, west side, north of William 21½ feet. Post. 40

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Pleasant street, northwest corner of Austin. 47
Pleasant street, southwest corner of Linden. 48
Pleasant street, southwest corner of Weld. Post. 48
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Purchase street, east side, opposite Clark. Post. 58
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Purchase street, northwest corner of Merrimac. Double. 51
Purchase street, northwest corner of Pope. 52
Purchase street, west side, 348 feet south of Campbell. Post. . . . 48
Purchase street, northwest corner of Union. 43
Reed street, west side, 145 feet north of Court. Post. 19
Reed street, west side, 25 feet north of Elm. Post. 15
Reed street, west side, 293 feet south of Kempton. Post. 18
Reynolds street, southwest corner of Weld. Post. 26
Reynolds street, west side, 17.9 feet south of Clark. Post. 29
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River street, southeast corner of Front. Post. 53
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Rivet street, southwest corner of Second. 62
Rivet street, southwest corner of County. Post. 59
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Rivet street, southwest corner of Hemlock. Post. 51
Rivet street, southeast corner of Bolton road. Post. 56
Robeson street, southwest corner of County. Post. 26
Robeson street, southeast corner of Cottage. Post. 19
Robeson street, southwest corner of Ashland. Post. 15

Robeson street, southeast corner of Cedar. Post. 21
Robeson street, south side, 424 feet west of Cedar. Post. 17
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Rockland street, southwest corner of County. Post. 58
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Rockland street, southwest corner of Lombard. Post. 50
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Russell street, southwest corner of Sixth. Post. 47
Russell street, south side, 179 feet west of Sixth. Post. 42
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Sawyer street, southwest corner of Bowditch. Post. 53
Sawyer street, southwest corner of Acushnet avenue. Post. 59
Sawyer street, southeast corner of Belleville avenue. Post. 65
Sawyer street, north side, 750 feet east of Belleville avenue. Post. . 63
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Second street, west side, north of Grinnell 61 feet. 63
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Second street, west side, 188 feet south of Blackmer. Post. 59
Seventh street, southwest corner of Union. Post. 31
Seventh street, west side, north of Madison 50 feet. 36
Shawmut avenue, southwest corner of Willis. Post. 18
Shawmut avenue, southwest corner of Parker. Post. 18
Shawmut avenue, west side, head of Locust. Post. 17
Shawmut avenue, west side, 32 feet north of Maitland. Post. . . . 14
Shawmut avenue, west side, north of Austin. Post. 13
Shawmut avenue, west side, 497 feet north of Durfee. Post. 12

Shawmut avenue, west side, 127 feet north of Durfee. Post. 12
Shawmut avenue, southwest corner of Grand. Post. 11
Shawmut avenue, west side, 203 feet north of Grand. Post. 11
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Shore street, west side, 264 feet south of Cove road. Post. 61
Short street, west side, 321 feet south of Allen. Post. 34
Sisson street, northwest corner of Union. Post. 25
Sixth street, west side, north of Grinnell 194 feet. Post. 60
Smith street, southwest corner of Chestnut. Double. 22
Smith street, southeast corner of Spruce. Double. 20
Smith street, southeast corner of Shawmut avenue. 22
Smith street, south side, east of Park 5 feet. Post. 29
South street, southwest corner of Acushnet avenue. 62
South street, southwest corner of Second. 62
South street, southwest corner of Water. Post. 63
South street, southwest corner of Prospect. Post. 61
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Spring street, southwest corner of Seventh. 32
Spring street, southeast corner of Fifth. 42
Spruce street, west side, 347 feet north of Parker. Post. 21
State street, northwest corner of Sycamore. 35
State street, southwest corner of Pearl. 34
Summer street, northwest corner of North. 16
Summer street, northwest corner of Hillman. 16
Summer street, southwest corner of Willis. 26
Sycamore street, southwest corner of Thomas. 30
Sycamore street, southwest corner of Summer. 24
Sycamore street, south side, west of Ash 68 feet. 22
Tallman street, southwest corner of Belleville avenue. Post. 61
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Thompson street, south side, 20 feet east of Hall. Post. 58
Thompson street, south side, 302 feet west of Bonney. Post. 55
Thompson street, southwest corner of County. Post. 59
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Tremont street, northwest corner of Maple. Post. 29
Trinity street, south side, 145 feet west of Cedar. Post. 19
Union street, southwest corner of Front. Post. 63
Union street, southwest corner of Water. Post. 57

Union street, southwest corner of First. Post. 56
Union street, southwest corner of Second. Post. 52
Union street, southwest corner of Acushnet avenue. Post. 48
Union street, southwest corner of Sixth. Post. 38
Union street, southeast corner of Emerson. Post. 28
Union street, south side, 344 feet west of Park. Post. 28
Viall street, west side, 188 feet south of Cove. Post. 59
Walden street, southwest corner of Maxfield. 31
Wall street, south side, east of Acushnet avenue 165 feet. 62
Walnut street, northwest corner of Front. Post. 61
Walnut street, southwest corner of Second. 57
Walnut street, southeast corner of Fourth. Double. 51
Walnut street, southwest corner of Seventh. Post. 38
Wamsutta street, south side, west of Front 200 feet. Post. 65
Wamsutta street, south side, west of Front 372 feet. Post. 65
Wamsutta street, south side, east of Acushnet av., 285 feet. Double. 64
Ward street, southwest corner of Bay. Post. 44
Washburn street, southeast corner of Acushnet avenue. Post. . . . 59
Washburn street, south side, west of North Front 228 feet. Post. . . 59
Washington street, southeast corner of Crapo. 58
Washington street, south side, west of Orchard 102 feet. 50
Washington street, southeast corner of Dartmouth. 46
Water street, southwest corner of Hillman. 65
Water street, southwest corner of North. Post. 64
Water street, west side, south of North 258 feet. 63
Water street, northwest corner of Middle. Double. 62
Water street, southwest corner of Elm. 60
Water street, west side, north of Centre, 46 feet. 50
Water street, west side, north of School 22 feet. 60
Water street, northwest corner of Walnut. 61
Water street, northwest corner of City wharf. 62
Water street, northwest corner of Coffin. 64
Water street, west side, head of Pine. Post. 67
Water street, west side, head of Leonard. Post. 62
Water street, southwest corner of Howland. Post. 60
Water street, northwest corner of Grinnell. Post. 60
Water street, northwest corner of Potomska. Post. 63
Water street, west side, 266 feet south of Potomska. Post. 63

Water street, northwest corner of Rivet. Post. 63
Water street, southwest corner of Blackmer. Post. 63
Water street, northwest corner of Delano. Post. 62
Water street, west side, head of Gifford. Post. 62
Water street, northwest corner of Cove. Post. 62
Weld street, southwest corner of State. Post. 43
William street, southwest corner of Bethel. Post. 51
William street, southwest corner of Second. Post. 48
William street, southeast corner of Acushnet avenue. Post. 47
William street, southwest corner of Purchase. Post. 43
William street, southwest corner of Sixth. Post. 38
William street, southwest corner of Eighth. 26
Willis street, southwest corner of Purchase. Post. 50
Willis street, southeast corner of Pleasant. Post. 41
Willis street, southwest corner of State. 32
Willis street, southwest corner of County. Post. 26
Willis street, southwest corner of Cottage. Post. 19
Willis street, south side, west of Cedar 200 feet. 18
Willow street, south side, 305.1 feet east of Cedar. Post. 16
Willow street, southeast corner of Shawmut avenue. Post. 13
Wing street, southwest corner of Fourth. 57
Wing street, southwest corner of Sixth. Post. 57
Winsor street, south side, west of County 455½ feet. Post. 58
Winsor street, south side, 77½ feet east of Crapo. Post. 60

Number of flush hydrants, ... 183
Number of post hydrants, ... 402

Total number of hydrants, ... 585

SUMMARY OF STATISTICS.

REPORT OF 1893.

IN ACCORDANCE WITH SUGGESTIONS ADOPTED BY THE

New England Water Works Association.

New Bedford Water Works, Bristol County, Mass.

Population by census of 1890,

40,705

Date of construction,

1866 to 1869, inclusive.

By whom owned,

The property of the City of New Bedford.

Source of supply,

From a storing reservoir artificially formed by constructing a dam across the valley of the Acushnet river, seven miles north of the centre of the city.

Mode of supply,

By gravitation into the city, thence pumped into a distributing reservoir on an elevated site.

PUMPING.

1. Builders of pumping machinery,

a. McAlpine engine, built by Quintard Iron Works.

b. Worthington engine, built by Henry R. Worthington.

c. High duty Worthington engine, built by Henry R. Worthington.

2. Description of coal,

First Contract.

a. Not applicable.
b. Bituminous.
c. Not applicable.
d. Pocahontas.
e. Price per gross ton, delivered, $4.53.
f. Percentage of ash, 8.
g. Wood, price per cord, $4.00.

Second Contract.

a. Not applicable.
b. Bituminous.
c. Not applicable.
d. Georges Creek Cumberland.
e. Price per gross ton, delivered, $4.24½.
f. Percentage of ash, 8.
g. Wood, price per cord, $4.00.

Third Contract.

a. Anthracite.
b. Not applicable.
c. Pea.
d.
e. Price per gross ton, delivered, $3.45.
f. Percentage of ash, 16.
g. Wood, price per cord, $4.00.

	McAlpine.	Worthington.	High Duty Worthington.
3. Coal consumed for the year, in pounds,	1,171,950	264,204	1,174,473
4. $\frac{\text{Lbs. of wood consumed in pounds.}}{3}$ = coal,	103	333	400
5. Total fuel consumed for the year (3) + (4),	1,172,053	264,537	1,174,873
6. Total pumpage for the year in gallons,	754,523,052	128,138,992	927,737,876

7. Av. static head against which pumps work,	125.9	125.3	125.6
8. Av. dynamic head against which pumps work,	135.2	126.5	127.9
9. *a.* Number of gallons pumped per pound of coal (3),	644	485	790
b. Number of gallons raised 100 feet per pound of coal for total coal (3),	870	614	1,010
10. Duty in foot pounds per 100 pounds of coal, using following formula, making no deductions for starting, banking fires, heating building, or anything else,			
$\text{Duty} = \frac{\text{Gallons pumped (6)} \times 8.34 \text{ (lbs.)} \times 100 \times \text{dynamic head (8)}}{\text{Total fuel consumed (5)}}$	72,588,530	56,074,821	84,237,392

Cost of Pumping Figured on Pumping Station Expenses, viz.: $12,436.21.

11. Per million gallons raised against average dynamic head (8) into reservoir,	$6.87
12. Per million gallons raised one foot high (dynamic),	5.25 cents.

COST OF PUMPING FIGURED ON TOTAL MAINTENANCE (see Financial CC.), VIZ.: $78,922.84.

13. Per million gallons raised against average dynamic head (8) into reservoir, $43.59

14. Per million gallons raised one foot high (dynamic), 33.32 cents.

FINANCIAL.

MAINTENANCE.

Receipts.		Expenditures.	
From consumers.		AA. Management and repairs,	$31,122.84
A. Water rates, domestic,	$72,681.88	BB. Interest on bonds,	37,200.00
B. Water rates, manufacturing,	8,195.73		
C. Net receipts from water,	$80,877.61	CC. Total maintenance for year,	$68,322.84
D. Miscellaneous (sales, etc.),	199.55	CC. Bonds paid,	20,000.00
E. Total,	$81,077.16	CC. Sinking funds,	600.00
From public funds:		DD. Balance to construction,	51,354.32
J. General appropriations, water,	12,000.00		
J. General appropriations, debt,	47,200.00		
K. Gross receipts from all sources,	$140,277.16	KK. Total,	$140,277.16

CONSTRUCTION.

Receipts.			Expenditures.			
R.	Balance from previous year,	$49,944.56	FF.	Extensions, mains,		$39,832.66
R.	Balance from maintenance,	51,354.32	GG.	Extensions, services,		
		$101,298.88		*a.* Services,	$6,166.63	
S.	Bonds issued,	00.00		*b.* Mill pipe, fountains and meters.	2,428.68	8,595.31
U.	Other sources, (services, private lines, meters, etc.),	7,110.18	HH.	Special extensions,		16,477.88
			II.	Total construction for year,		64,905.85
			JJ.	Balance,		43,503.21
V.	Total,	$108,409.06	KK.	Total,		$108,409.06

W.	Net cost of works to this date,	$1,590,121.77
X.	Bonded debt at this date, $540,000; trust fund, $100,000,	640,000.00
Y.	Sinking fund,	4,118.50
Z.	Average rate of interest,	$5\frac{64}{100}$ per cent.

CONSUMPTION.

1. Estimated total population at date,
   55,000
2. Estimated population on lines of pipe at date,
   45,000
3. Estimated population supplied at date,
   44,158
4. Total number gallons consumed for year,
   1,824,275,536
5. Passed through domestic meters,
   9,249,864 gallons, or $0\frac{5}{10}$ per cent.
6. Passed through manufacturing meters,
   278,975,304 gallons, or 15 per cent.
7. Average daily consumption in gallons,
   4,998,015
8. Gallons per day to each inhabitant (1),
   99
9. Gallons per day to each customer (3),
   113
10. Gallons per day to each tap (distribution 22),
    664

DISTRIBUTION.

MAINS.

1. Kind of pipe used,
   Wrought iron cement lined, and cast-iron.
2. Size,
   From 4 to 30 inches.
3. Extended,
   29,139 feet.
4. Discontinued,
   10,114 feet.
5. Total now in use,
   $72\frac{2343}{10000}$ miles.

6. Cost of repairs per mile,
$16.55
7. Number of leaks for the year,
8
8. Small distribution pipe, less than 4 inches, total length,
5,944 feet.
9. *a.* Fire hydrants added,
43
b. Watering-cart connections added,
0
10. *a.* Number of fire hydrants now in use,
585
b. Number of watering-cart hydrants now in use,
40
11. Stop gates added,
66
12. Number now in use,
808
13. Small stop gates, less than 4 inches, total,
62
14. Number of blow-off gates,
74
15. Range of pressure at centre for day and night,
29 to 40 lbs.

SERVICES.

16. Kind of pipe used,
Lead and cast-iron.
17. Size,
From ½ to 8 inches.
18. Extended,
14,081 feet.
19. Discontinued,
88 feet.
20. Total now in use,
$46\frac{59}{100}$ miles.

21. Service taps added.

400

22. Number now in use.

7,531

23. Average length of service laid during past year,

35 feet.

24. Average cost of service,

a. Gross, $15.42
b. Net, $4.83

25. Meters added,

28

26. Number now in use,

a. Domestic, 113
b. Manufacturing, 59

27. Motors and elevators added.

0

28. Number now in use.

31

In Board of Aldermen,
February 8, 1894.

Received, ordered printed in the City Documents, and sent down for concurrence.

D. B. LEONARD,
City Clerk.

In Common Council,
2 mo. 21, 1894.

Concurred.

WILLIAM A. MACKIE,
Clerk.

ADDITIONAL SUPPLY.

The following is a copy of the report to the City Council relative to the matter of the additional supply, and referred to on page 6 line 10 of this pamphlet:

City of New Bedford,
Office of the New Bedford Water Board,
November 23, 1893.

To the City Council of the City of New Bedford:

Gentlemen,—On Tuesday evening, May 24th, the following communication was presented to this Board:

City of New Bedford, Mass.,
In Common Council,
May 10, 1893.

Whereas, in view of the seeming urgent demand for early action looking toward an additional supply of water sufficient to meet the probable demands of the future, as set forth in a communication from the New Bedford Water Board and presented to the City Council this evening, it is hereby ordered,

That the New Bedford Water Board be, and they are hereby authorized and instructed to proceed at once with the work of securing all necessary options to purchase and procure property, surveys, and plans, for the purpose of providing for an increase in the water supply of the City of New Bedford, the expense thereof to be provided from the funds at the disposal of said Board, and to make full report of their doings to the City Council.

Adopted in concurrence.

Presented to and approved by the Mayor, May 12, 1893.

A true copy. Attest:

D. B. LEONARD, City Clerk.

Upon receipt of this communication, this Board entered upon a discussion concerning the methods of procedure by which the desired object could best be obtained.

The opinion was soon reached that the question in all its bearings should have a careful investigation by engineers of long experience in hydraulic problems, and whose conclusions would commend themselves to all as based upon sound judgment.

As the result of many inquiries, a contract was executed with Messrs. George S. Rice and George E. Evans, Hydraulic Engineers, most highly recommended to them, to make an exhaustive and careful examination of the possible ways by which an additional water supply could be secured, and to make all surveys necessary to submit a complete preliminary study, from which we might decide upon the best plan to recommend for the city's adoption.

According to this contract, which was executed on May 31, 1893, the city agreed to pay these gentlemen the sum of $3,400, for which amount they were to submit, not only a full report to this Board, but also detailed estimates of the cost of the different schemes examined, and further, that all the plans, field notes, and other data, from which these results have been arrived at, should be deposited in the office of this Board.

In accordance with the wish of this Board, they first examined into the feasibility of a gravity system from the Lakeville ponds to the present receiving reservoir. This naturally suggests itself as the simplest method of obtaining an additional supply. The route of such a system would of necessity be located in the valley of the Acushnet river, and consequently would follow very closely the course of our present conduit.

The estimates for the construction of this plan aggregated so large a sum that the engineers informed us that in their opinion a better scheme could be devised giving the city all the advantages contained in this plan, and also many others, and at the same time for a far less sum of money.

Following out this expert opinion, they have proceeded to devise a plan entirely different and which is fully described in the report which they have now submitted to us, and which we forward to you with this as a part of our report.

One of the problems which this city, in common with many others, would be called upon in a very few years to solve, is the securing of a high service supply for the more elevated portions of the city.

To gain this supply from the present water works system, and indeed from any system devised simply to add to the present one, would cost in the near future a large amount.

By this new plan, while simply working to enlarge one supply, we also gain the high service system without any additional cost.

This plan would increase the pressure about 25 pounds and give us a much more effective hydrant service throughout the city.

This Board is unanimous in endorsing the plans outlined and recommended in the report of our engineers.

We are convinced that it has been arrived at by the most thorough study of the whole question, and that their estimates are entitled to the confidence of the City Council.

The whole line of the proposed new force main has been sounded at frequent intervals, and the character of the digging at the site of the proposed reservoir has been closely examined.

Naturally before any plan can be fully matured and its details worked out, it would seem proper that the City of New Bedford should take the first steps recommended therein, that is, to secure from the State such rights in the system of ponds which are needed to carry this plan into effect, and which we do not yet possess.

We have therefore decided to make this partial report of the action thus far taken by us under the vote of your honorable

body, and to recommend that proper action be taken to secure the necessary authority from the approaching term of the Legislature.

Respectfully submitted,

J. C. BROCK,
SAMUEL C. HART,
DAVID B. KEMPTON,
HENRY HOWARD,
EDMUND WOOD,

New Bedford Water Board.

OFFICE OF
GEO. S. RICE & GEO. E. EVANS,
CIVIL AND HYDRAULIC ENGINEERS.

95 Milk St., Boston, November 20, 1893.

To the New Bedford Water Board:

Gentlemen,—In compliance with your request of last May we have carefully examined the question of an additional water supply for the City of New Bedford, and respectfully present the following report and plan:

The present water supply for the City of New Bedford is situated on the Acushnet river, about seven miles north of the city, and has a watershed area of about seven and a third square miles; the water is collected in a reservoir, of considerable area but shallow in depth, and then conveyed in a brick conduit to a receiving reservoir inside of the city limits; it is then pumped to the distributing reservoir on the adjacent hill, and from there carried to the different parts of the city by the pipe system. The city has lately augmented this supply during the summer months by the drainage area of Little Quittacas pond, which, however, is small in extent, having a little over two miles of watershed.

With an average consumption of about five millions of gallons, this combined drainage area of nearly nine and a half miles is not enough for the present wants of the city in a moderately dry season, and should next year be a year of low rainfall, the city would be badly in need of water, and steps should be taken immediately to secure an additional supply, even if it be only temporary in its character.

In looking for the source of a new supply we immediately directed our investigations to the Middleborough ponds, lying about twelve miles to the north of the city, and after a careful and extended examination we have no hesitancy in stating that these ponds, with their large drainage area, are the natural and most available source for an ample supply of water for

many years for the cities of New Bedford and Taunton and their immediate vicinities.

The Middleborough ponds are four in number and are called Assawampsett pond, (including the eastern portion and called Pocksha pond,) Long pond, Great Quittacas and Little Quittacas ponds. They have a drainage area of over fifty-two square miles,

Long pond,	23.8
Assawampsett pond,	13.7
Great Quittacas pond,	12.5
Little Quittacas pond,	2.1
	52.1

and are a collection of natural reservoirs, (having an area of about nine and a third square miles,) and all draining into the Nemasket river. During the summer, samples of water have been taken from Long, Great Quittacas and Little Quittacas ponds, and the State Board of Health has kindly made analyses of these samples, copies of which are given below:

Commonwealth of Massachusetts.—State Board of Health. Water Analysis.

(Parts in 100,000.)

Number.	Date of Collection.	Date of Examination.	Appearance. Turbidity.	Appearance. Sediment.	Appearance. Color.	Odor. Cold.	Odor. Hot.	Residue on Evaporation. Total.	Residue on Evaporation. Loss on Ignition.	Residue on Evaporation. Fixed.	Ammonia. Free.	Ammonia. Albuminoid. Total.	Ammonia. Albuminoid. In Solution.	Ammonia. Albuminoid. In Suspension.	Chlorine.	Nitrogen as Nitrates.	Nitrogen as Nitrites.	Hardness.	Iron.	Oxygen consumed.	Remarks.
	1893																				
10,658	July 12	July 13	Very slight.	Very slight.	0.65	None.	None.	3.45	1.80	1.65	.0000	.0138	.0120	.0018	.47	.0000	.0000	0.5			Gt. Quittacas pond.
10,659	12	13	Very slight.	Very slight.	0.10	None.	None.	2.75	1.30	1.45	.0000	.0162	.0120	.0042	.48	.0000	.0000	0.5			Little " "
10,660	12	13	Very slight.	Very slight.	1.10	None.	None.	3.75	2.20	1.55	.0000	.0234	.0202	.0032	.42	.0000	.0000	0.3			Long pond.
10,661	12	13	Very slight.	Very slight.	1.20	None.	None.	4.05	2.35	1.70	.0000	.0236	.0216	.0020	.48	.0000	.0000	0.3			Snipatuit pond.
10,706	26	27	Very slight.	Slight.	0.12	Distinctly vegetable.	Distinctly vegetable.	3.90	1.65	2.25	.0008	.0182	.0140	.0042	.43	.0030	.0000	0.5			Lit. Quittacas pond.
10,707	26	27	Very slight.	Slight.	0.60	Distinctly vegetable.	Distinctly vegetable.	4.05	1.80	2.25	.0006	.0156	.0128	.0028	.47	.0000	.0000	0.5			Gt. Quittacas pond.
10,708	26	27	Very slight.	Slight.	1.00	Distinctly vegetable.	Distinctly vegetable.	4.50	2.25	2.25	.0000	.0182	.0162	.0020	.39	.0000	.0000	0.5			Long pond.
10,769	Aug. 9	Aug. 11	Slight.	Slight.	0.75	None.	None.	3.35	1.80	1.55	.0000	.0132	.0110	.0022	.44	.0000	.0000	0.5			Long pond, 5′ below surface.
10,770	9	11	Distinct.	Slight.	0.50	None.	None.	3.60	1.75	1.85	.0000	.0140	.0122	.0018	.53	.0000	.0000	0.6			Gt. Quittacas pond, 5′ below surface.
10,771	9	11	Distinct.	Sl't yellow green.	0.60	Distinctly vegetable.	Distinctly vegetable.	3.25	1.60	1.65	.0020	.0124	.0098	.0026	.48	.0000	.0000	0.8			Gt. Quittacas pond, 36′ below surface.
10,772	9	11	Distinct.	Slight.	0.12	None.	None.	3.05	1.40	1.65	.0004	.0160	.0126	.0034	.48	.0000	.0000	0.5			Lit. Quittacas pond, 5′ below surface.
10,946	31	Sept. 1	Slight.	Sl't brown.	0.10	None.	Very faint or none.	2.90	1.05	1.85	.0000	.0160	.0130	.0030	.50	.0050	.0000	0.7	.0000	.3397	Lit. Quittacas pond.
10,947	31	1	Slight.	Sl't brown.	0.55	Very faintly vegetable.	Very faintly vegetable.	3.40	1.65	1.75	.0000	.0154	.0126	.0028	.48	.0000	.0000	0.5	.0000	.5253	Great " "
10,948	31	1	Slight.	Sl't brown.	0.70	Faintly vegetable.	Dist'ly veg. sweetish.	3.35	1.85	1.50	.0000	.0148	.0126	.0022	.44	.0000	.0000	0.2	.0025	.7426	Long pond.
10,984	Sept. 6	8	Slight.	Slight.	0.10	None.	None.	2.75	1.10	1.65	.0000	.0176	.0152	.0024	.47	.0000	.0000	0.3	.0030	.2652	Lit. Quittacas pond.
10,985	6	8	Slight.	Slight.	0.45	None.	Very faint or none.	3.60	1.50	2.10	.0000	.0172	.0134	.0038	.50	.0050	.0000	0.6	.0025	.4758	Great " "
10,986	6	8	Very slight.	Very slight.	0.70	Very faint or none.	Faintly vegetable.	3.30	1.50	1.80	.0000	.0132	.0116	.0016	.45	.0090	.0000	0.2	.0090	.6825	Long pond.

These samples show that the water is of good quality, those of Long pond being a little darker in color and slightly less desirable as a source on that account.

It was intended in the beginning of the investigation to include Snipatuit pond, lying southeast of the Middleborough ponds, in the examination, but when it was found to be very shallow and covered in summer with vegetation in large quantities, it was abandoned as a less desirable source of supply.

The cities and towns contiguous to this system of ponds and which would presumably take their water supply from them are as follows, and they had in 1890, according to the last census, a population of 76,625.

New Bedford,	40,733
Taunton,	25,448
Middleborough,	6,065
Freetown,	1,417
Acushnet,	1,027
Rochester,	1,012
Lakeville,	923
	76,625

If these cities and towns should have five times the population as given by the last census, the Middleborough ponds (if used entirely as a source of water supply and kept from contamination) would be sufficient for the increased population, as they could be depended upon for a daily supply of over forty millions of gallons, which, during a season of drought, would furnish sufficient water for four hundred thousand inhabitants, allowing one hundred gallons for each person per day.

Having considered the quality and quantity of the water from the Middleborough ponds, we come to the question of method and expense of conveying it to the City of New Bedford.

It is evident that those having charge of the water works of your city, having previously foreseen the necessity of an additional supply, and that the studies have been made in the

direction of the ponds which have heretofore been considered, and through your superintendent we have had access to all the data, including the plans and profiles of surveys on both sides of the present storage reservoir, from Long and Little Quittacas ponds to the dam at the lower end of the reservoir.

From these and the records of the original works we were able to ascertain the approximate cost of constructing a gravity system capable of conducting twenty millions of gallons per day from the Quittacas ponds to the receiving reservoir near the present pumping station.

The water level of the Quittacas ponds is about fifty feet above the mean sea level in New Bedford, and the surface of the water in the receiving reservoir is about twenty feet lower; to convey these twenty millions gallons from the ponds to the distributing reservoir would require the construction of a conduit, (of masonry or steel,) entirely independent of the present supply and more than ten miles in length, and of necessity through low and wet ground, and most of the way parallel, and in some places adjacent to the present conduit.

This conduit, with the necessary appurtenances and connections at the ponds, and with the addition of another engine at the present pumping station, would cost about $1,841,000, subdivided as follows:

Connection between the ponds,	$25,000
Gate house and Little Quittacas connections,	23,360
Conduit and appurtenances,	1,418,600
Receiving reservoir connection and additional pumping engine, force main, etc.,	115,640
Contingencies,	158,400
	$1,741,000
Land damages,	100,000
Total,	$1,841,000

This would give an ample supply, but with no additional pressure in the city, for by using the present reservoir, with its high water line of one hundred and fifty-four feet above the

mean sea level, would leave the highest parts of the city unsupplied with water, and would necessitate building in a short time a high service system for the elevated portions of the city.

The cost of this scheme was so great, even if constructed in the most economical manner, that we immediately set about to ascertain some better and less expensive method of increasing the supply, and we have the following to present, based on actual surveys, and after a study of the problem for the last five months.

Taking the Middleborough ponds, as a source of an additional supply and connecting them so that the water can be taken from a much lower level, and locating a pumping station near the southeast corner of Long pond and next to the road at that place, and connecting it with Little Quittacas pond by a steel pipe conduit of sufficient diameter, twenty millions of gallons per day could be forced through nearly eight miles of a 48-inch main to a distributing reservoir of about forty-eight millions gallons capacity, situated on the top of the high hill in the town of Dartmouth, and lying northwest of Turner's Mills.

The level of high water in the proposed reservoir will be two hundred and fourteen feet above the mean sea level, or sixty feet above the present distributing reservoir, which could be readily supplied from the former. If the proposed reservoir be connected to the distributing system, the city will have the advantage of this increased head.

This additional supply, as described, could be constructed for one million one hundred and twenty-five thousand three hundred dollars, ($1,125,300) sub-divided as follows:

APPROXIMATE ESTIMATE.

60-inch steel intake pipe into Little Quittacas pond,	$15,500
60-inch steel pipe conduit from pond to engine house,	51,000
Engine buildings, including pump well,	125,000
2 ten-million gallons pumping engines,	100,000
3 boilers and piping,	7,500
40,000 lineal feet 48-inch steel force main, including gates, blow-offs, etc.,	275,500

Reservoir and gate house, (48,400,000 gallons),	$147,000
36-inch distributing mains from proposed reservoir to present distributing and receiving reservoirs,	201,000
Pipe conduits connecting Assawampsett and the Quittacas ponds,	25,000
Railroad from East Freetown station to pumping station,	50,000
	$997,500
Contingencies,	99,800
	$1,097,300
Land damages,	28,000
	$1,125,300

To accomplish this result, sixty-inch pipe connections between Assawampsett and Great Quittacas ponds and Great and Little Quittacas ponds should be made, thus securing the supply from the whole watershed of the Middleborough ponds.

It is proposed to take the water from Little Quittacas pond at its southwest corner at a point four or five hundred feet from the shore, where the water is nearly ten feet in depth.

At the intake a granite screen chamber nine feet square (inside) would be located, and from there the water would be conveyed through a sixty-inch steel pipe conduit about thirty-five hundred feet in length to the pumping station near Morton's corner on the North Rochester road. The engine house should be large enough to accommodate three ten-million gallons pumping engines. In the estimate only two engines are proposed for the present, believing that one engine is sufficient to supply the city, but the second would be held in reserve in case of accident or during extensive repairs to the first. The boiler house should be large enough for the present needs, but so arranged that it could be enlarged without destroying or disarranging any portion of the other buildings, when a third engine is required.

The pipe line from the engine house lies in a southwesterly direction, crossing the Record and Middleborough roads near their junction, and the New Bedford Branch of Old Colony railroad about forty-four hundred feet south of Braley's Station; thence across the wooded country to the reservoir.

This reservoir is to be five hundred feet wide and seven hundred fifty feet long, measured on the inside top of the embankment; the depth will be twenty-four feet and have twenty feet of water.

The embankment will be built from the natural material and have a cement masonry core wall in its centre. The inside slopes will be covered with a layer of broken stone and then paved with granite.

From the reservoir the water will be conveyed to the city through a thirty-six-inch cast-iron main, which will follow the most direct route to the present distributing reservoir and pumping station.

The carrying out of this plan, besides giving an ample supply of good, wholesome water, would enable the city to have two independent supplies, one of which could be applied entirely to mill purposes if desired.

It would enable the present works to be repaired and perfected, and would ensure a sufficient fire pressure at any point inside of the city limits.

Throughout the whole investigation we have been very much assisted by your superintendent, Mr. R. C. P. Coggeshall, who has done everything in his power to give us all information bearing on the subject.

Respectfully submitted,

GEO. S. RICE & GEO. E. EVANS,

Civil and Hydraulic Engineers.

In Board of Aldermen,
November 23, 1893.

Received, placed on file, and sent down for concurrence.

D. B. LEONARD,
City Clerk.

In Common Council,
November 23, 1893.

Concurred.

WILLIAM A. MACKIE,
Clerk.

1893—CITY DOCUMENT NO. 4.

FORTY-SECOND ANNUAL REPORT

OF THE

TRUSTEES

OF THE

FREE PUBLIC LIBRARY

OF THE

CITY OF NEW BEDFORD,

MASS.

NEW BEDFORD:
EVENING JOURNAL COMPANY, PRINTERS TO THE CITY.
1894.

Officers of the Free Public Library

FOR THE YEAR 1894.

TRUSTEES.

Ex-Officio. Terms expire January, 1895.

STEPHEN A. BROWNELL, Mayor of the City.
JOHN H. BARROWS, President of the Common Council.
ARTHUR E. PERRY, Chairman of the Committee of the City Council on Public Instruction.

Elected by the City Council.

ISAAC B. TOMPKINS, Jr.,	Term expires April, 1894.
MATTHEW C. JULIEN,	Term expires April, 1894.
LEONARD B. ELLIS,	Term expires April, 1895.
ARTHUR G. GRINNELL,	Term expires April, 1895.
WALTER S. ALLEN,	Term expires April, 1896.
ALEXANDER McL. GOODSPEED,	Term expires April, 1896.

PRESIDENT OF THE BOARD.

THE MAYOR.

CLERK.

WILLIAM L. R. GIFFORD.

COMMITTEES.

On the Library—Messrs. Julien, Allen, and Grinnell.
On Finance—Messrs. Allen, Tompkins, and Goodspeed.
On the Building—Messrs. Tompkins, Ellis, and Barrows.

LIBRARIAN.

ROBERT C. INGRAHAM.

ASSISTANT LIBRARIAN.

WILLIAM L. R. GIFFORD.

ASSISTANTS.

JOSEPHINE A. MERRICK, M. E. BROWN,
SUSIE H. GAMMONS.

JANITOR.

YORICK W. AMES.

REPORT.

To the City Council of the City of New Bedford:

GENTLEMEN,—In presenting this their forty-second annual report, the trustees of the New Bedford Free Public Library desire to express the hope that in the coming year some method may be devised to increase the usefulness of the library to the inhabitants of New Bedford and to make the valuable collection of books upon its shelves more easy of access. This it is believed can be done, and effectually, if the City Council will bring to the consideration of the question how it can best be done a liberal spirit coupled with an intelligent appreciation of existing conditions and needs.

The library fails to perform its functions if, in addition to the distribution of works of general popular interest among the citizens, it does not also supply to the student and professional man the opportunity for literary work and scientific investigation and the examination and study of the many valuable works to be found in the library, but which are not for general distribution. Provision should be made for those who wish to consult works of reference in every department of literature, science, philosophy, architecture, art, and other subjects.

To this end and to bring the library up to a proper standard of usefulness, more and better arranged room is an imperative necessity. The library is fast outgrowing its present

quarters. There is now scarcely enough space for storing, much less than enough for an orderly and systematic arrangement of books; and, in order to obtain the best results from the large and exceedingly valuable collection and to make the books most useful to the citizens to whom they belong, more extensive and better accommodations should be provided by the city, so that a more liberal policy in the distribution and use of books can be inaugurated by the trustees.

The purpose of every such institution as the Free Public Library is the development in the community of all that pertains to culture, education, and refinement in the most liberal sense as applied to every individual, and there should be no book in its collection of any practical utility to which any one to whom it could be of any value may not have access in the freest possible manner consistent with its security.

Much criticism has been heard in relation to the arrangement and management of the library, some of it perhaps just, but it should be remembered that the fault may not lie with the trustees nor with those who are directly engaged in the work of arrangement and distribution. The present conditions seem to the trustees, in part at least, to be the result of circumstances for which they are in no wise responsible. The causes which have led to these conditions are now matter of history. If sufficient space had originally been appropriated for each subject, no trouble would now be experienced in arrangement; and a subject catalogue, the lack of which has caused criticism, would be a matter very easy of accomplishment. The necessity for a complete catalogue and for a systematic arrangement of the books, classifying them under their different subjects, has long been felt by those in charge of the library. As it is, subjects have overflowed the spaces originally assigned to them, and it is safe to say that the lines of demarcation in the original arrangement of the library have been practically obliterated, and through no fault of those having the matter in charge, but only because of lack of space.

The librarian and his efficient assistants are handicapped, if we may use the term, by existing conditions, and, while making every effort possible to please, they could do their work much more satisfactorily to themselves and to the public if those conditions were changed as recommended in this report.

The remedy for this condition is obvious. A rearrangement in the room at present devoted to book stacks would be, in the opinion of the trustees, an herculean task, if not practically impossible of accomplishment.

There is a remedy, and the only one which suggests itself. It is to supply additional space, and this has been referred to in previous reports, and we beg leave to call your attention to what was said by the trustees in their report for 1892, as follows:

"As stated at length in our communication made to you on June 9th, the library requires a new building which shall not only provide for its immediate and pressing needs, but allow for further extension of its sphere of usefulness during coming years."

Two reasons are given in the same report for a new building rather than an appropriation of more of the present building to the use of the library, either of them entitled to serious consideration. One reason is that the building occupied by the library should be what the present is not, fire-proof for the safety of so large and valuable a collection, the absolute security of which from destruction is of the utmost consequence. The number of volumes of books, not including pamphlets, in the library is increasing, stated approximately, at the rate of 2,000 each year, and the volumes now number about 60,000, many of which are very valuable and could with difficulty be replaced if destroyed, and of old and rare works there are not a few which could not be replaced. There are four volumes in the library the estimated value of which is $1,500, and there are others of great value, and the safety of these is of paramount importance.

Another reason is, that the New Bedford Free Public Library should occupy a building constructed expressly for it, adapted to work which is not now, but which might be accomplished, and with a view to future requirements.

Our library combines two very important functions, as has been said, and it should not only distribute popular literature to the general public, but it should give all possible facilities for study to those who desire to consult the large and valuable collection of books, which are of value to students, professional men and others interested in special work, which is found upon its shelves and which, if properly arranged, could be made available for their use. In this connection it may be remarked that some discussion has been had among the trustees as to the feasibility of admitting individuals, under certain restrictions, to examine books in the book stacks, which is done to some extent in other large libraries. This would of course be a great advantage to the student or professional man; but the trustees are of the opinion that it is entirely impracticable, to any considerable extent, under the present order of arrangement. If a new building, properly constructed, adapted to all requirements, were furnished, it is believed that the value and usefulness of the library would be increased to the community to an immeasurable extent, and that the facilities needed for alcove work, so called, could be offered and would be highly appreciated by those who desire the facilities for study which such an arrangement would afford. It is true that the library contains many books which should be examined only under the careful espionage of a responsible person, for which, in a new building, special rooms, in charge of competent custodians, could be provided.

There are many books of reference, dictionaries, encyclopedias, and other works now made accessible by placing them outside the rail, but the library contains many special works, useful to the student, in the various departments, which are not

so accessible, but which could be made so under the arrangement suggested in a new building.

The present is a progressive age, and it would be in keeping with its spirit if some of the city's generous and public-spirited citizens would provide for a new library building from private funds, but if nothing of that kind is done, the time seems fully ripe for the city to act in a spirit of progressive liberality so that, in the near future, a building shall be erected fulfilling all the requirements of a library building, and which shall be a credit to the city.

The reading room is well patronized. The lighting of this room is still susceptible of improvement. The trustees have heard complaints from citizens who are regular attendants, for the purpose of reading newspapers and periodicals, that the quality of the light is at times very poor and never as good as it should be. This is a matter which requires attention, and fresh lamps free from carbon deposit should be frequently placed in this room and a more regular and stronger current secured. The same remarks apply to the lighting of the room devoted to book stacks.

One other matter of minor importance requires attention. The paint in the library has become dingy and discolored, and, while the reading room is kept scrupulously clean, it has not so cheerful and attractive an appearance as it should have, and as it would present if the woodwork were repainted and the walls kalsomined.

During the year the trustees have purchased the German library of the late Julius Kirschbaum. It consists of about one thousand volumes, chiefly in the departments of philosophy, religion, and poetry. The list of newspapers in the reading room has also been enlarged to the extent of the space that is available for them.

At the time when Dr. George H. Dunbar retired from the Board of Trustees, the office of superintendent of the library, the duties of which had been so long and faithfully discharged

by him, was abolished, and the general oversight of the library was transferred to the committee on the library, which now consists of three members of the Board.

At a meeting of the trustees held May 31, 1893, the following resolutions, prepared by Mr. Henry H. Crapo on behalf of the Board, were unanimously adopted:

Resolved, That the long and useful service of Dr. George H. Dunbar as a member of the Board of Trustees of the Free Public Library deserves a formal expression of gratitude on the part of this Board.

Mr. Dunbar's connection with the management of the library covers a period of thirty-seven years. He was elected a member of this Board in 1856; during the two following years he presided over the Board as Mayor of the city; in 1861 he was again elected as a member of the Board; in 1868 he became a member as chairman of the committee on public instruction; in 1873 he was again chairman of the Board as Mayor of the city; in 1875 he was again elected as a trustee, and served continuously in that office until April, 1893. He was chosen superintendent of the library in 1875, and continued to hold that office until his connection with the Board of Trustees ceased.

During this long connection with the management of the library Dr. Dunbar has given much of his time and thought to the best interests of the library, and his constant and faithful work has been of inestimable benefit and entitles him to the gratitude of all our citizens.

The present members of the Board desire to express their appreciation of the assistance which his thorough knowledge of all the details of the management of the library enabled him to give to his associates, and of the unvarying courtesy and kindness which characterized his relations with them.

Voted, That the clerk is hereby instructed to send Dr. Dunbar a copy of the above resolutions.

As a result of the appropriation by the City Council of $1,000, the work of constructing a subject catalogue in an attempt to bring out a more orderly and perfect arrangement,

so far as possible, has been begun and is progressing satisfactorily, and the trustees believe that the result will show that the money so applied has been judiciously appropriated and well and wisely expended.

The trustees desire to call attention to the elaborate and exhaustive opinion of the City Solicitor, Mr. Clifford, dated Dec. 7, 1893, submitted in response to certain questions propounded to him under date of Nov. 2, 1893, in relation to the trust funds held by the city in which the library has a beneficial interest.

The position of the city, combining in itself the capacity of debtor, of creditor, and of trustee, and the objections thereto, are carefully, and it is believed correctly, stated in the following words, which we take the liberty of quoting from the opinion:

"A very difficult question is raised in regard to the investment of trust funds in its own obligations by a municipality acting as trustee. It is a general rule, applicable to all trustees, that they shall not invest the trust funds in their own obligations. This rule is enforced rigidly and is absolutely inflexible. It is a breach of trust for a trustee to make such investment under any circumstances. It is no exception that the trustee uses absolutely good faith and judgment, or that the trust fund is actually benefited thereby. The courts will not permit this to be done, no matter what the conditions are. The dangers to the trust fund from permitting such investments as a general rule are apparent, and the courts have said that the safety of beneficiaries requires that no exceptions be allowed. The trustee must know that no circumstances can excuse him if he ventures to infringe the rule. The situation is an inconsistent one when a man is both debtor and creditor and represents both ends of a bargain.

"Does the same rule apply to cities and towns which are trustees for public charities? Do the reasons of the rule apply? If they do, there can be no reason why any exception to the well established rule should be allowed. Is any danger to the trust fund incurred by allowing the city to invest it in its own obligations? Is there any possible conflict of interest

between the city in its capacity as debtor and its capacity as trustee? Can there exist any circumstances in which the interests of those benefited by the trust will be in conflict with the interests of the tax-payers of the city who are responsible for the city's debt? It seems to me that there may be a danger to the fund if this kind of investment be allowed; that there may be a conflict of interest between the city in one capacity and in the other; that circumstances may exist in which the fact that the tax-payers are responsible for the debt may be prejudicial to the best interests of the trust. For instance, it is perfectly possible that at the time when the city receives the trust fund it may have little interest in the proposed trust and great interest in some other public work. At once there will arise the temptation to apply this money to the popular project at the smallest expense in the way of interest that is possible. That is, the city will care more for making good terms for itself as borrower than it will for securing the highest possible rate of income for the trust fund. It does not do to say that in a given instance there is no such temptation, or that the given transaction is perfectly fair to both sides. The possibility of such a conflict is the basis of the rule, not the actual existence of such a conflict. Nor is it any answer to say that the investment is a better one for the fund than can otherwise be made. The same answer can be made in the case of every trustee. But if any proof of the possibility of conflicting interests is needed, it is only necessary to point to the actual state of things in this city. Take the case of the Sylvia Ann Howland trust fund for example. The city is now paying 6 per cent. interest on the amount of this fund, and this interest is raised annually by taxation. It is proposed to fund this indebtedness into 4 per cent. bonds. The city as debtor objects to continuing the present rate of interest. The library trustees and School Committee representing the beneficiaries of the fund, as it were, are consulted. It is hardly necessary for me to remark that there is a very substantial conflict of interest between the City Government acting in the interest of the tax-payers and the library trustees and School Committee acting for the interests of the objects benefited by the trust fund.

"No clearer example could well be found of the fact that where a city invests in its own obligations the interests of the fund and the interests of the city do not always lie in the same direction.

"The case of the sinking funds is not in point. There the sinking fund commissioners are trustees and not the city. The statute expressly authorizes the commissioners to invest in the city bonds. The trustees in buying bonds have no interest in anything except making the best bargain as purchasers; they are in no danger of favoring the city at the expense of the fund. The interest which every individual tax-payer has in the amount of the city indebtedness cannot incapacitate him as trustee from purchasing city bonds; it is too remote.

"I have not been able to find any express authority on this point. It seems to me, however, that, inasmuch as the reasons for the general rule exist in the case of the city, there is no reason why the rule should not apply. I am of opinion, therefore, that it is not proper for a city holding trust funds to invest them in its own obligations, whether bonds or mere book credits."

This opinion covers the ground suggested by the questions which it answers, but goes no further, and does not suggest a remedy. It is, however, of the utmost importance that the matter of the security of the fund and the regularity of the income therefrom be carefully considered, and some action taken which shall not only insure a regular income to be applied to the purposes of the trust, but shall eventually restore the fund with the least possible burden to the tax-payer.

It may be assumed that the city is under an obligation to apply annually to the purposes of the trust a sum equal at least to six (6) per cent. upon the amount standing to the credit of the various trust funds upon the books of the City Treasurer, the principal of which has been expended by the city not in the direction indicated in the various instruments creating the trusts. This obligation is dependent upon a familiar legal principle, so that, until the funds are restored and properly invested, there seems to be no escape from the conclusion that the city is bound to pay the legal rate of interest on its obligation as a debtor to the funds.

It has been suggested, and the scheme meets the approval of the trustees, that, as the one hundred thousand dollars

($100,000) bequeathed to the city by Miss Sylvia Ann Howland for the promotion within the city of liberal education and for the enlargement from time to time of our Free Public Library has been spent for the introduction of water into the city, this indebtedness might be put in the form of a thirty-year six per cent. bond of the city which might be issued for this purpose, and a sinking fund provided which would, at the end of the thirty years, restore the fund without the burden falling too heavily upon the tax-payers. The proposed scheme seems all the more just for the reason that, at the time this money was diverted from its proper investment in safe and profitable securities, and expended for an object entirely foreign to that for which it was expressly given, its judicious investment in long time securities might have afforded a much larger income than would result from the scheme suggested. It would require time to restore the fund to its original status, but in the meantime there would be no irregularity or uncertainty as to the income. If the matter remains as it is, the certainty and regularity of the income may depend on the caprice of successive administrations, and if the money is raised at once and invested at a lower rate of interest, unless the city raise and appropriate a sum equal to the deficit, the fund will not afford the same income it might have afforded if it had been properly invested when it came into the possession of the city in 1871, and the trustees respectfully urge that neither the library nor the cause of liberal education in the city should suffer in the proper readjustment of this matter of trust funds, but that their rights should be very jealously guarded by the City Council, to which the subserving of those rights is committed.

New Bedford, with a library so splendidly endowed and with so large and valuable a collection, should take pride in standing in the foremost rank among American cities in showing that spirit of "enlightened liberality" commended and commemorated in the tablet placed in the reading room of the

present library as a memorial of the generosity and beneficence of the donor of the fund to which we have referred; and the trustees, in conclusion, respectfully urge that the matters suggested for your consideration be acted upon in the same spirit of enlightened liberality; and they hope that in the near future the library will have, in its own right and constructed expressly for its own use, a habitation worthy of itself and of the city.

APPENDIX.

GENERAL STATISTICS FOR 1893.

Books and pamphlets purchased in 1893,	2,429
Volumes donated in 1893,	311
Pamphlets donated in 1893,	353
Volumes bound,	267
Volumes re-bound and repaired,	520
Volumes worn out and rejected,	353
Volumes overdue and regarded as lost,	125
U. S. government duplicates returned,	7
New cards issued,	1,007
Newspapers now on file in the reading room,	23
Books taken from the library in 1893,	88,645
Increase of circulation over that of 1892,	4,938

The following table shows the attendance at the library on Sunday during 1893. The largest attendance was 61, November 19, and also November 26; the smallest was 12, September 3; average attendance, 33. After June 25 the library was closed on Sundays until September 3.

Jan. 1.	29
8.	45
15.	48
22.	42
29.	45
Feb. 5.	50
12.	55
19.	42
26.	46
Mar. 5.	51
12.	38
19.	40
26.	30

April 2.	31
9.	29
16.	36
23.	28
30.	32
May 7.	36
14.	28
21.	28
28.	25
June 4.	25
11.	24
18.	23
25.	20
Sept. 3.	12
10.	18
17.	23
24.	20
Oct. 1.	27
8.	20
15.	26
22.	18
29.	30
Nov. 5.	31
12.	29
19.	61
26.	61
Dec. 3.	16
10.	37
17.	31
24.	33
31.	45

Total attendance for 44 Sundays, 1,464. Average attendance, 33.

FINANCIAL STATEMENT CONCERNING THE FREE PUBLIC LIBRARY FOR 1893.

STATEMENT OF THE LIBRARIAN.

1893.			
Jan. 1.	Cash on hand,	$51.37	
	Sale of paper stock,	1.70	
	Books lost and paid for,	1.69	
	Fines during 1893,	227.27	$282.03
	Paid for expressage, freight, and jobbing,	$36.94	
	P. O. box and postage,	35.56	
	Books and papers,	9.59	
	Binding and paper cutting,	9.81	
	Stationery,	24.02	
	Photographs,	34.40	
	Incidentals,	86.18	
1894, Jan. 1.	Balance in hands of librarian,	45.53	$282.03

FREE PUBLIC LIBRARY ACCOUNT.

1893.	Bills approved January,	$524.23	
	February,	497.50	
	March,	497.50	
	April,	497.50	
	May,	497.50	
	June,	497.50	
	July,	497.50	
	August,	497.50	
	September,	497.50	
	October,	497.50	
	November,	497.50	
	December,	497.50	$5,996.73
1893.	Annual appropriation,	$5,370.00	
	By transfer from dog fund,	26.73	5,396.73
	Deficit,		$600.00

TRUST FUND ACCOUNT.

1893.			
Jan. 1.	Sylvia Ann Howland fund,	$2,019.43	
	George Howland, jr., fund,	276.53	
	Charles W. Morgan fund,	88.84	
	Oliver Crocker fund,	217.90	
	George O. Crocker fund,	555.29	
	James B. Congdon fund,	440.37	
	Dog fund,	697.77	$4,296.13

SYLVIA ANN HOWLAND FREE PUBLIC LIBRARY FUND.

1893.			
Jan. 1.	Unexpended balance of income,	$2,019.43	
July 1.	Six months' interest,	1,500.00	
Dec. 31.	Six months' interest,	1,500.00	
	Amount returned, overpayment, Houghton, Mifflin, & Co.,	2.00	$5,021.43

Bills approved for books, periodicals, and binding:

January audit,	$214.27	
February,	156.66	
March,	245.68	
April,	151.91	
May,	729.31	
June,	342.45	
July,	218.64	
August,	173.00	
September,	196.97	
October,	172.25	
November,	578.87	
December,	342.41	$3,522.42

The detailed statement of the expenditures from the income of this fund is as follows:

Academy of Natural Sciences of Philadelphia,	$5.00
American Journal of Philology,	3.00
Anthony, E., & Sons, Incorporated,	6.00
Appleton, D., & Co.,	24.00
Bancroft-Whitney Co.,	24.00
Boston Public Library,	1.50
Boston Society of Natural History,	3.00
Cadby, J. W.	48.13
Campbell, W. J.	33.45
Columbia Publishing Co.,	5.00

Commissioner of Patents,	$31.20	
Cupples, J. G., & Co.,	2.50	
Dews, E.	454.38	
Egypt Exploration Fund,	10.00	
Ellis, G. H.	2.00	
Essex Institute,	4.50	
Evening Journal Co.,	5.00	
Folger, Mrs. William C.	2.07	
Francis, D. G.	11.71	
Gately, E., & Co.,	4 00	
Guild, William H., & Co.,	302.94	
Haferkorn, H. E.	3.35	
Harper, F. P.	3.15	
Harvard Graduates' Magazine,	1.00	
Hathaway, J. H., City Treasurer, periodicals,	129.44	
Houghton, Mifflin, & Co.,	28.50	
Humphrey, G. W.	3.30	
Hutchinson, H. S., & Co.,	682.75	
Kirschbaum, W. G.	412.00	
Lasher, G. F.	2.50	
Library Bureau,	1.00	
Little, Brown, & Co.,	359.82	
Littlefield, G. E.	198.82	
Lowdermilk, W. H., & Co.,	5.00	
Macomber, P. A.	2.50	
Mason, D., & Co.,	8.67	
Massachusetts Historical Society,	3.00	
Mercury Publishing Co.,	6.00	
Miller, S. E.	6.10	
Munroe, C. E.	1.50	
Munsell's Sons, Joel,	4.50	
New England Magazine,	3.00	
Phillips, G. R.	3.00	
Publishers' Weekly, R. R. Bowker,	8.32	
Rider, S. S.	15.75	
Roffe, A. H., & Co.,	49.90	
Sampson, Murdock, & Co.,	6.00	
Schoenhof, C.	67.48	
Skinner, J.	1.75	
Taber, R. W.	493.88	
Tilley, R. H.	2.00	
Tirrell, A. T.	3.87	
University of Pennsylvania Press,	2.00	
Waldron, C. D.	1.00	
Waldron, H. D.	15.00	
Zahm, S. H., & Co.,	3.19	$3,522.42

GEORGE HOWLAND, JR., FUND.

1893.			
Jan. 1.	Unexpended balance of income,	$276.53	
	One year's interest,	96.00	
		$372.53	
	Yorston Bros.,	60.00	$312.53

CHARLES W. MORGAN FUND.

1893.			
Jan. 1.	Unexpended balance of income,	$88.84	
	One year's interest,	60.00	$148.84

OLIVER CROCKER FUND.

1893.			
Jan. 1.	Unexpended balance of income,	$217.90	
	One year's interest,	60.00	
		$277.90	
Academy of Natural Sciences,		30.00	$247.90

GEORGE O. CROCKER FUND.

1893.				
Jan. 1.	Unexpended balance of income,		$555.29	
	One year's interest,		400.00	
			$955.29	
A. H. Davenport,		$35.00		
L. B. Ellis,		12.00		
F. S. Gifford,		50.00		
Library Bureau,		83.00	180.00	$775.29

JAMES B. CONGDON FUND.

1893.			
Jan. 1.	Unexpended balance of income,	$440.37	
	One year's interest,	30.00	$470.37

CHARLES L. WOOD FUND.

1893.	One year's interest,	$80.00	$80.00

DOG FUND.

1893.			
Jan. 1.	Unexpended balance of income,	$697.77	
	Received from County Treasurer,	1,206.39	
	By transfer, City Auditor,	72.24	
		$1,976.40	

Almy & Milne,	$6.00		
Ames, Y. W.	88.00		
Anthony, E., & Sons, Incorp.,	43.38		
Belcher, W. M., & Co.,	13.25		
Bradish, J. Q., & Co.,	9.34		
Briggs & Lawrence,	59.71		
Carter, Rice & Co., Incorp.,	89.10		
Charleston News and Courier Co.,	8.00		
Chicago Inter-Ocean,	2.00		
Delano, F. E.	196.53		
DeWolf, Anna M.	11.50		
Dews, E.	196.43		
Ellis, L. B.	7.50		
Evening Journal Co.,	7.54		
Gammons, L. M.	69.00		
Gammons, S. H.	16.50		
Goss, F. B. & F. P.,	2.00		
Headley & Reed,	16.50		
Kingman, G. D.	7.75		
Library Bureau,	35.50		
McAuliffe, D. J.	80 00		
Mercury Publishing Co.,	151.54		
Merrick, Emma J.	205.00		
National Binder Co.,	6.25		
Nicholson & Co.,	9.25		
Providence Journal Co.,	7.12		
Roffe, A. H., & Co.,	4.50		
San Francisco Chronicle,	9.30		
Storrs, A., & Bement Co.,	6.80		
Taunton Daily Gazette,	4.76		
Weekly News, Woodsville, N. H.,	7.50		
Woman's Journal,	2.50	$1,380.05	$596.35

Total unexpended balance in the control of the Board of Trustees:

1894.			
Jan. 1.	Sylvia Ann Howland fund,	$1,499.01	
	George Howland, Jr., fund,	312.53	
	Charles W. Morgan fund,	148.84	
	Oliver Crocker fund,	247.90	
	George O. Crocker fund,	775.29	
	James B. Congdon fund,	470.37	
	Charles L. Wood fund,	80.00	
	Dog fund,	596.35	$4,130.29

WILLIAM L. R. GIFFORD, Clerk.

GIFTS, 1893.

	Volumes.	Pamphlets.
American Antiquarian Society, Worcester,		1
American Congregational Association, Boston,		1
American Journal of Photography, Publishers of	1	
American Philosophical Society, Philadelphia, Pa.,	1	
American Unitarian Association, Boston,	1	
Ames, John G., Washington, D. C.,	1	
Amherst College, Amherst,		1
Apprentices Library Company, Philadelphia, Pa.,		2
Astor Library, New York, N. Y.,		1
Bancroft-Whitney Co., San Francisco, Cal.,		1
Bogert & Durbin Co., Philadelphia, Pa.,	1	
Bolton, H. C., New York, N. Y.,		1
Boston Public Library,		1
Boston Record Commissioners,	1	
Bradford, William, Family of	Framed cartoon.	
Bradlee, C. D., Boston,	1	
Bridgewater Normal School,	1	
Brock, J. C.	1	
Brookline Public Library,		1
Brooklyn Library, Brooklyn, N. Y.,		2
Buffalo Historical Society, Buffalo, N. Y.,		1
Buffalo Library, Buffalo, N. Y.,		1
Butler Hospital for the Insane, Providence, R. I.		1
Cameron, A.,		15
Campbell, W. J., Philadelphia, Pa.,		1
Carpenter, C. C.,		1
Chicago Department of Public Works, Chicago, Ill.,	1	1
Children's Hospital, Boston,		1
Choate, J. C., Essex,		1
Christian Science Journal, Publishers of,	1	
Cincinnati Public Library,		3

Clarke Institute for Deaf-mutes, Northampton,		3
Cleveland Public Library,		1
Clifford, J. H., Heirs of,	52	3
Coggeshall, R. C. P.,	5	
Commissioners of the State Reservation at Niagara, 214 Broadway, New York, N. Y.,		1
Connecticut Historical Society, Hartford, Conn.,		1
Cooper Union, New York, N. Y.,		1
Cutter, A. E., Charlestown,		1
Dayton Public Library, Dayton, O.,		1
Denver Public Library, Denver, Col.,		2
Detroit Public Library, Detroit, Mich.,		1
Egypt Exploration Fund,		1
Emery, Edwin,	1	
Engineer and Mining Journal, New York, N. Y.,	1	
Fall River Public Library,		1
First Baptist Church, New Bedford,	2	
Fletcher Free Library, Burlington, Vt.,		1
Friends' Free Library, Germantown, Pa.,		1
Gammon Theological Seminary, Atlanta, Ga.,		1
General Society of Mechanics and Tradesmen, 18 East 16th street, New York, N. Y.,		2
Georgia Historical Society, Savannah, Ga.,		1
Green, Dr. S. A., Boston,	4	32
Handsworth Public Library, Handsworth, Staffordshire, England,		1
Hartford Library Association, Hartford, Conn.,		2
Hartford Public Library, Hartford, Conn.,		2
Harvard University, Cambridge,		5
Historical Society of the State of Montana, Helena, Montana,		1
Howland, C. P., Marion,	3	
Huling, Ray G., Cambridge,		1
Jersey City Free Public Library,		2
Johns Hopkins University, Baltimore, Md.,		4
Julien, Alexis A., New York, N. Y.,		2
Kirschbaum, W. G.,	Photograph.	
Kirschbaum, W. G. and E. T.	14	1
Lancaster Library,		1
Lawrence Public Library,		5
Lee, Leslie A., Brunswick, Me.,		2
Library Company of Philadelphia,		1
Lodge, H. C., Washington, D. C.,	6	
Los Angeles Public Library, Los Angeles, Cal.,		2
Lund, J. W., Cambridge,		1
Lynn Public Library,		1

Maimonides Library, New York, N. Y.,		1
Massachusetts, Commonwealth of,	12	1
Massachusetts Board of Gas and Electric Light Commissioners,		1
		1
Massachusetts Civil Service Commissioners,		1
Massachusetts Free Public Library Commission,		1
Massachusetts Institute of Technology, Boston,		1
Massachusetts School for the Feeble-minded, Waltham,		1
Massachusetts Topographical Survey Commission,	1	
Mercantile Library Association, New York, N. Y.,		1
Mercantile Library Association, St. Louis, Mo.,		1
Mercantile Library Association, San Francisco, Cal.,		1
Mercantile Library Company of Philadelphia, Pa.,		5
Mexican Central Railway Co., 70 Kilby street, Boston,	1	
Millicent Library, Fairhaven,		4
Minneapolis Public Library,		1
Monroe, Fred. S.		1
Newark Free Public Library, Newark, N. J.,		2
New Bedford, City of,	4	
New Bedford Board of Assessors,		11
New England Historic Genealogical Society, Boston,		1
New Haven Free Public Library,		3
New Jersey State Library,	1	
Newton Free Library, Newton,		1
Northampton Lunatic Hospital,		1
Peabody Institute, Baltimore, Md.,		1
Peabody Institute, Peabody,		1
Perkins Institution for the Blind, Boston,		1
Providence Public Library,		1
Providence Record Commissioners,	1	1
Randall, C. S.	3	
Redwood Library, Newport, R. I.,		1
Reuben Hoar Library, Littleton,		1
Rodman, Edmund	4	1
Royal Commissioners for the British Section of the Chicago Exhibition, 1893,	1	
Rugg, C. P.	1	
Russell, Martha,	3	
St. Louis Public Library, St. Louis, Mo.,		1
Salem Public Library,		2
Salisbury, Stephen, Worcester,	1	
Schurman, J. G., Ithaca, N. Y.,	1	
Seaver, E. P., Boston,	1	
Silas Bronson Library, Waterbury, Conn.,		2
Smithsonian Institution, Washington, D. C.,	11	10

Société Nationale d' Acclimatation de France, Paris, France,	1	
Society of Colonial Wars, New York, N. Y.,	1	
Springfield City Library,		14
Sunset Club, 154 Lake street, Chicago, Ill.,	1	
Swaim, Joseph S.		5
Swansea Public Library, Swansea, Wales,		2
Taunton Public Library,		1
Trustee for the Children of Shalam, Dona Ana, New Mexico,	1	
Trustees of Public Reservations, Boston,		1
United Societies of Shakers, East Cambridge, N. H.,	1	
United States:		
— Agricultural Department,		41
— Bureau of Education,		13
— Civil Service Commission,	1	
— Interior Department,	75	7
— Interstate Commerce Commission,	1	
— Labor Bureau,	1	
— Patent Office,	1	
— State Department,	15	10
— Treasury Department,	2	1
— War Department,	16	1
University of California, Berkeley, Cal.,		1
University of Michigan, Ann Arbor, Mich.,		1
University of Pennsylvania, Philadelphia, Pa.,		2
Waltham Public Library,		1
Warren County Library and Reading Room Association, Monmouth, Ill.,		2
Waterhouse, S., St. Louis, Mo.,		7
Watertown Free Public Library,		1
Welsh, Herbert, 1305 Arch street, Philadelphia, Pa.,		1
Wilmington Institute, Wilmington, Del.,		1
Woburn Public Library,		1
Worcester Free Public Library,		1
Worth, Benjamin,	2	
Yale University, New Haven, Conn.,		4

In Board of Aldermen,
January 11, 1894.

Received, ordered printed in the City Documents, and sent down for concurrence.

D. B. LEONARD,
City Clerk.

In Common Council,
January 11, 1894.

Concurred.

WILLIAM A. MACKIE,
Clerk.

1893—CITY DOCUMENT NO. 5.

ANNUAL REPORT

OF THE

CHIEF ENGINEER

OF THE

FIRE DEPARTMENT

OF THE CITY OF NEW BEDFORD,

FOR THE YEAR ENDING DECEMBER 31, 1893.

FREDERICK MACY, Chief Engineer.

NEW BEDFORD:
EVENING JOURNAL COMPANY, PRINTERS TO THE CITY.
1894.

Committee of the City Council

ON

FIRE DEPARTMENT,

1893.

Aldermen,

HARRY C. JENNEY,

Residence, 1 Smith Street.

OLIVER W. COBB,

Residence, 100 Washington Street.

Councilmen,

WILLIAM T. TAYLOR,

Residence, 93 School Street.

JAMES McFARLIN,

Residence, 74 Spruce Street.

JAMES H. BAMFORD,

Residence, 90 Merrimac Street.

ENGINEER'S DEPARTMENT.

Chief Engineer,
FREDERICK MACY,
Residence, 234 Acushnet Avenue.

First Assistant Engineer,
LORING T. PARLOW,
Residence, 5 North Street.

Second Assistant Engineer,
PLINY B. SHERMAN,
Residence, 433 Acushnet Avenue.

Third Assistant Engineer,
SAMUEL C. FRANCE,
Residence, 152 Mt. Pleasant Street.

Fourth Assistant Engineer,
GEORGE M. CRAPO,
Residence, Corner Elm and North Second Streets.

Clerk of Board of Engineers,
LUTHER G. HEWINS, JR.,
Residence, 762 County Street.

Master Mechanic,
DANIEL D. BRIGGS,
Residence, 43 Bedford Street.

Department Engineer,
GEORGE H. PARKER,
Residence, Parker Street.

Department Driver,
EDWARD F. A. COWEN,
Residence, 10 Campbell Street.

Department Lineman,
WILLIAM CURTISS,
Residence, 132 Kempton Street.

REPORT.

HEADQUARTERS FIRE DEPARTMENT,
CITY HALL, NEW BEDFORD,
DECEMBER 31, 1893.

GENTLEMEN:—In compliance with the requirements of the city ordinance governing the Fire Department of the city, I herewith submit to you my seventeenth annual Report of the condition and work performed by this department for the year 1893, together with a list of members, with their rank, number of badge, age, residence, and occupation; location of hydrants and fire alarm boxes; list of keyholders; a statement of receipts and expenses; fires and alarms; losses and insurance, as near as could be ascertained; and such suggestions as I think will be necessary for the good of the department.

The department is in good condition and the force under good discipline, having worked in perfect harmony during the year. Our losses have been somewhat larger than they were for 1892, from the fact that we have had four fires which caused over two-thirds of the whole loss for the year, and nearly as much as the whole loss for 1892.

The fires causing the greatest losses were Moynan & Co's dry goods store, which occurred on February 20th; Pardon Russell's ice houses on April 22d; Washburn's planing mills,

with the Ullman Manufacturing Company's establishment on May 29th, and the wholesale grocery store of Wm. F. Potter & Co. on July 11th.

Our department has been ample for all the fires occurring during the year, but the fire at Washburn's Mills called out every company in the department with the exception of Hook & Ladder No. 3. Our Veteran Firemen's Association was also called out for the first time at this fire and rendered efficient service, and demonstrated the wisdom of having them in readiness to respond to all third alarms as a reserve force.

The saddest event of the year for the whole department occurred on June 24th. While responding to an alarm from box 36, William P. Sowle, for over 20 years driver of Engine No. Two, was thrown from his engine and killed. He was buried in the Soldiers' lot at Rural cemetery on June 27th, nearly the whole department attending his funeral.

Lewis G. Allen, for nearly twenty years driver of Hook & Ladder Truck No. Two, died on October 17th from typhoid fever. He was buried in his family lot at Oak Grove cemetery on the 20th, his funeral being attended by a delegation from the several companies.

ACCIDENTS AND INJURIES.

The following is the record of the accidents and injuries occurring during the year, which have been reported to the Board of Commissioners of the Massachusetts Relief Fund and acted upon by them:

February 11th.—Samuel Watson, 2d, of Engine No. Four; crushed toe; off duty 12 days.

February 11th.—George H. W. Tripp, driver of Engine No. Four; injured knee; off duty 78 days.

April 22d.—Clarfus Vansant, ladderman of Hook & Ladder No. One; injured hand; off duty 42 days.

June 24th.—William P. Sowle, driver of Engine No. Two; thrown from engine and killed.

July 11th.—Robert N. Allen, hoseman of Engine No. Six: thrown from truck; injured side; off duty 12 days.

July 11th.—Lieut. Jason L. Ballou of Engine No. Six; injured leg; off duty 6 days.

William P. Sowle's widow was the first person to receive the benefit of the law passed at the last session of the State Legislature whereby one thousand dollars is paid from the State treasury to the widow and children of a fireman killed in active service.

FORCE OF THE DEPARTMENT.

The force of the department consists of one chief, four assistants, and clerk, twenty-nine permanent men and one hundred and seventy-five call men, making a total of two hundred ten men.

APPARATUS.

The apparatus consists of seven steam fire engines—six in commission and one in reserve; one new La France engine, contracted for to be delivered about February 1st; one hand engine at the Head of the River; one 2 and two 4-wheeled hose carriages; five hose wagons; two Hayes aerial ladder trucks; one Ryan truck in commission and old truck in reserve; nine exercise and coal wagons, and one telegraph wagon. There has been built at the repair shop one hose wagon for No. Five, and we have one building for No. Six. Engines Nos. One, Two, Four, Six, and Seven are in first-class order. The new La France engine ordered to take the place of No. Five, with the new one contemplated for the new house on Acushnet avenue and Davis street, will give us seven prac-

tically new engines in commission, and I would recommend that the Silsby and the old No. Five be put in good order and kept as reserve engines. This would give us nine steam fire engines, which I think would be ample for several years.

I would recommend that one-half of the new Davis street engine house be equipped with engine and hose wagon, and the other half be used for one of the spare engines. The old four-wheeled hose reel of Hose No. Two is getting poor, and will have to be replaced with something very soon; I would recommend placing a combination hose and chemical in its place. In my last annual report I called the attention of the government to the necessity of an aerial ladder truck in the place of Hook & Ladder No. Two. There have been many large mills and tenement blocks built in that section, and I would again recommend, if the financial conditions will permit, that the incoming government give us a truck with ladders long enough to save lives in these high buildings.

HOUSES.

There are seven brick and one frame engine houses, all in very good condition. The new house for No. Five has been finished, and I think it will compare favorably with any fire station in this section of the State, both in looks and convenience. The new double house building on Acushnet avenue and Davis street will be finished in the spring, and will be all that will be needed in that end of the city for a great many years.

HORSES.

There are thirty-two horses belonging to the department, most of them in good condition, but a few are getting old and incapacitated, and it will be necessary to replace them the coming year. One has been purchased and one sold during the year.

HARNESSES.

There are ten sets of double and ten single harnesses, nearly all in good condition.

HOSE.

There are fourteen thousand feet of two and a half inch cotton rubber-lined hose in the department, twelve thousand feet of which is good and two thousand getting old, and it may be necessary to replace some of it during the coming year.

WATER SUPPLY.

The number of hydrants January 1st, 1893, was five hundred and forty-two (542); added during the year, forty-one (41), making a total of five hundred and eighty-three (583). We have had a good supply of water at all fires, and the system has been much improved by the large mains placed in Purchase and Union streets during the year, and I feel that the thanks of this department are due to the members of the Water Board, the superintendent and foreman of construction, for their hearty co-operation and willingness to do all in their power for the safety of the city.

FIRE ALARM.

The fire alarm has worked well and given good satisfaction during the year. There has been considerable work done, and three boxes were added in the following locations:

Box 124. Acushnet avenue and Sawyer street.
134. Belleville avenue and Nye street.
135. Belleville avenue and Coggeshall street.

We now have a total of seventy-seven (77) boxes, twenty-five (25) of which are private; forty (40) miles of wire; eleven (11) bells and strikers; eight (8) fifteen-inch engine

house gongs; seven (7) seven-inch engineers' gongs, and six (6) small tappers, operated by a battery of two hundred and twenty-four (224) cups.

PROTECTIVE DEPARTMENT.

In my last annual report I spoke of the disadvantages which this department was laboring under for the want of rubber covers sufficient to cover the stocks in some of our large stores. At the fire of Moynan & Co's dry goods store on February 20th, when the loss was twelve thousand dollars, it should not have been more than half that amount had we the means at our disposal to work with. In December of the present year the City Government appropriated two hundred and fifty dollars for rubber covers, and we purchased twenty-seven, which, with the old ones we had, gives us a fair supply, but not what we should have. The members have been prompt in responding to alarms, and under the superintendence of the president of the society, Mr. Charles S. Kelley, have done efficient work.

RECEIPTS AND EXPENDITURES.

Annual appropriation for 1893,		$44,550.00
Special appropriation,		3,398.88
Cash collected and turned over to City Treasurer:		
Sale of old material,	$52.29	
Sale of dressing,	313.54	
Sale of coal,	12.13	
Sale of horse,	75.00	
Use of horse,	24.00	
Pumping,	48.48	
Care of police alarm signals,	866.50	
Overpaid bills,	18.05	1,409.99
Transfers to balance,		9,593.74
		$58,952.61
Expenditures for 1893,		$58,952.61

CONCLUSION.

To His Honor the Mayor and gentlemen of the City Council, for the interest taken in this department, to the Board of Engineers, for their hearty support, and to the officers and members of the fire and police departments for the faithful manner in which they have performed all their duties, I return my most sincere thanks.

FREDERICK MACY,
Chief of Fire Department.

STATEMENT OF EXPENDITURES.

Salaries,	$2,250.00
Pay rolls and Protecting Society,	39,668.34
Horsekeeping, feeding, and shoeing,	5,979.03
Wood, coal, and lights,	1,948.79
Fire alarm, labor, and supplies,	4,423.09
Engine, hose, and wagon repairs,	1,899.66
Telephones,	415.00
Rents,	90.00
Repairs of buildings,	762.99
Printing and incidentals,	1,021.86
Horses,	250.00
Harnesses and repairs,	243.85
	$58,952.61

ONWARD STEAM FIRE ENGINE COMPANY

No. 1.

House on Purchase street, foot of Franklin street. Engine built by Amoskeag Manufacturing Co., Manchester, N. H.; capacity, 500 gallons per minute; weight of engine as drawn to fires, 6,950 pounds; put into service August 26, 1869. Present company organized December 30, 1871.

Date of Joining.	No. of Badge.	Name.	Rank.	Age.	Residence.	Occupat'n.
April 29, 1873,	8	Allen W. Tinkham,	Captain,	39	5 Smith street,	Carpenter.
Jan. 8, 1873,	17	George A. Tripp,	1st Lieut.,	40	63 Foster "	Shoemaker.
May 7, 1883,	11	F. W. Brightman,	2d "	35	178 Kempton st.,	Paint Mfg.
Jan. 29, 1873,	7	Julian A. Sweet,	Clerk,	45	134 State street,	Roll coverer.
April 24, 1882,	6	Edward M. Durfee,	Hoseman,	49	788 Acushnet av.	Carriage smith.
May 1, 1880,	14	Charles A. Wilson,	"	37	95 Walden st.,	Carpenter.
Dec. 29, 1882,	19	John Whitehead,	"	49	580 Purchase st.,	Frame maker.
July 28, 1890,	16	Charles H. Thomas,	"	37	87 Locust st.,	Roll coverer.
Jan. 3, 1892,	9	Robert Wolfenden,	"	28	401 Pleasant st.,	Barber.
May 5, 1890,	15	Oscar S. Hammond,	"	25	70 North street,	Carpenter.
April 24, 1893,	10	James L. Haskins,	"	28	643 Purchase st.,	Teamster.
July 31, 1893,	18	John Wolfenden,	"	29	400 Pleasant st.,	Jeweler.
April 1, 1892,	20	Harris N. Tinkham,	Engineer,	37	Engine house,	Engineer.
Aug. 1, 1892,	23	Squire A. Gifford,	R'l Driver,	35	"	Hostler.
Dec. 30, 1871,	21	James L. Bryant,	Driver,	55	"	Hostler.
May 1, 1892,	22	William A. Moore,	Stoker,	30	Pope and Pleasant sts.,	Machinist.
Aug. 29, 1889,	12	Albert D. Milliken,	Substitute,	23	Middle street,	Cotton worker.
Sept., 1885,	13	John T. Aghen,	"	30	45 Foster street,	Clerk.

PROGRESS STEAM FIRE ENGINE COMPANY No. 2.

House, corner Purchase street and Mechanics lane. Engine built by the Manchester Locomotive Works, Manchester, N. H., capacity, 500 gallons per minute; weight of engine as drawn to fires, 7,000 pounds; put in commission November 6, 1884. Company organized October 27, 1860.

Date of Joining.	No. of Badge.	Name.	Rank.	Age.	Residence.	Occupat'n.
May 1, 1862,	25	John Downey,	Captain,	56	118 N. Second st.	Teamer.
Sept. 7, 1874,	32	Charles F. Dean,	1st Lieut.,	36	59 Elm street,	Carriage painter.
Jan. 12, 1892,	28	Henry A. Sherman,	2d Lieut.,	37	63 Kempton st.,	Carriage smith.
Aug. 7, 1874,	27	James D. Allen,	Clerk,	57	202 Purchase st.,	Clerk.
Jan. 1, 1872,	29	James G. Harding,	Hoseman,	58	62 State street,	Carpenter.
June 6, 1874,	26	E. R. Leverett,	"	40	188 Middle st.,	Clerk.
July 3, 1876,	34	Moses Dean,	"	39	202 Purchase st.,	Blacksmith.
May 5, 1884,	36	Samuel W. Mitchell,	"	35	155 Purchase st.,	Clerk.
May 5, 1884,	35	William R. Wagner,	"	36	208 Pleasant st.,	Telephone inspector.
Jan. 21, 1886,	37	E. K. Pierce,	"	31	19 Mill street,	Shoemaker.
Oct. 6, 1890,	33	Alex. J. Aiken,	"	31	116 N. Second st.	Painter.
Dec. 1, 1890,	24	James L. Crowley,	"	24	Elm and Water sts.,	Plumber.
Jan. 12, 1892,	30	George W. Haskins,	Substitute,	25	236 Kempton st.,	Hostler.
Sept. 1, 1892,	129	E. C. Spooner,	"	19	116 Middle st.,	Clerk.
Apr. 23, 1892,	38	Benjamin Groves,	Engineer,	38	Engine house,	Engineer.
June 25, 1893,	39	Charles Allen,	Driver,	37	"	Hostler.
July 16, 1876,	41	M. Conway,	R'l Driver,	55	"	Hostler.
Aug. 20, 1874,	40	L. W. Hayes,	Stoker,	50	23 North street,	Wood turner.

CORNELIUS HOWLAND STEAM FIRE ENGINE COMPANY No. 4.

House, corner Sixth and Bedford streets. Engine built by the Manchester Locomotive Works, Manchester, N. H.; capacity, 500 gallons per minute; weight of engine, as drawn to fires, 7,000 pounds; put into service May 20, 1884. Company organized February 1, 1867.

Date of Joining.	No. of Badge.	Name.	Rank.	Age.	Residence.	Occupat'n.
May 29, 1868,	50	William A. Gibbs,	Captain,	43	181 Fourth st.,	Cabinet maker.
July 26, 1886,	43	Wm. E. Watson, Jr.,	1st Lieut.,	30	37 Fifth street,	Clerk.
May 26, 1890,	51	Edwin F. Tripp,	2d Lieut.,	23	350 County st.,	Express-man.
Oct. 26, 1891,	55	Wm. N. Jewett,	Clerk,	27	183 Fourth st.,	Clerk.
Jan. 29, 1867,	46	James M. Tripp,	Hoseman,	58	211 Acushnet av.	Carpenter.
Sept. 29, 1872,	44	Charles S. Wing,	"	39	199 S. Second st.	Clerk.
Dec. 6, 1877,	47	Charles H. Card,	"	45	73 Forest street,	Lineman.
Nov. 10, 1879,	53	Benj. F. Hinckley,	"	36	23 Madison st.,	Printer.
Aug. 31, 1885,	42	Jas. J. Donaghy,	"	28	91 Wash'ton st.,	Laundry-man.
Feb. 16, 1888,	49	Frank C. Jennings,	"	27	19 Allen street,	Clerk.
Mar. 25, 1889,	45	Leander Reed,	"	44	3 Bay street,	Machinist.
Aug. 28, 1882,	52	Samuel Watson, 2d,	"	35	173 Fourth st.,	Clerk.
Sept. 1, 1892,	54	William C. Hiscox,	Substitute,	30	45 Bedford st.,	Machinist.
Sept. 26, 1892,	48	John P. Kennedy,	"	25	100 "	Plumber.
Apr. 29, 1878,	56	Alonzo V. Jason,	Engineer,	39	Engine house,	Machinist.
Jan. 27, 1873,	58	John H. Backus,	Stoker,	42	Rivet and Crapo sts.,	Black-smith.
Jan. 29, 1867,	57	Geo. H. W. Tripp,	Driver,	57	Engine house,	Hostler.
Apr. 1, 1889,	59	Wm. C. Kennedy,	R'l Driver,	26	"	Hostler.

ZACHARIAH HILLMAN STEAM FIRE ENGINE COMPANY No. 5.

House, corner County and Hillman streets. Engine built by Messrs. Clapp & Jones, Hudson, N. Y.; capacity, 500 gallons per minute; weight of engine as drawn to fires, 7,250 pounds; put into service December 13, 1873. Company organized December 13, 1873.

Date of Joining.	No. of Badge.	Name.	Rank.	Age.	Residence.	Occupat'n.
May 5, 1884,	67	George H. Cook,	Captain,	32	14 Spruce st.,	Clerk.
Dec. 31, 1888,	70	Thomas H. Forbes,	1st Lieut.,	32	121 Cedar st.,	Shoemaker.
Sept. 30, 1889.	71	Obed S. Cowing,	2d Lieut.,	30	187 North st.,	Carpet upholst'r.
Oct. 1, 1885,	63	Joseph C. Forbes,	Clerk,	27	201 Cedar st.,	Shoemaker.
Dec. 13, 1873,	62	Isaiah H. Wilcox,	Hoseman,	58	506 Acushnet av.	Painter.
May 1, 1876,	64	Geo. H. Chadwick,	"	59	354 Kempton st.,	"
Sept. 30, 1890,	68	Thomas N. Myers,	"	32	205 Summer st.,	Frame maker.
June 7, 1888,	72	Henry K. Jones,	"	25	329 Cottage st.,	Machinist.
Feb. 9, 1891,	60	Geo. E. Macomber,	"	41	120 High street,	Shoemaker.
Dec. 28, 1891,	73	Ernest L. Soule,	"	30	124 Maxfield st.,	Sashmaker.
Dec. 28, 1891,	65	Geo. H. Nickerson,	"	25	342 Cottage st.,	Shoemaker.
Apr. 26, 1892,	66	Chas. F. Smith,	"	37	60 Sycamore st.,	W'dwork'r.
Feb. 1, 1893,	61	Frank B. Chadwick,	Substitute,	21	354 Kempton st.,	Machinist.
June 26, 1893,	69	John F. Gifford,	"	37	383 "	Foreman st. dept.
Dec. 13, 1873,	74	Mart. Blanchard, Jr.,	Engineer,	49	Engine house,	Engineer.
Jan. 7, 1876,	75	Benj. F. King, Jr.,	Driver,	52	"	Hostler.
Jan. 28, 1883,	77	Martin S. Nelson,	R'l Driver,	36	"	"
May 1, 1882,	76	Charles N. Jones,	Stoker,	39	329 Cottage st.,	W'dwork'r.

FREDERICK MACY STEAM FIRE ENGINE COMPANY No. 6.

House on Fourth street, head of Potomska street. Engine built by Manchester Locomotive Works, Manchester, N. H.; capacity, 500 gallons per minute; weight of engine as drawn to fires, 7,100 pounds; put into service November 1, 1882. Company organized October 31, 1882.

Date of Joining.	No. of Badge.	Name.	Rank.	Age.	Residence.	Occupat'n.
Oct. 26, 1886,	130	Edward W. O'Neil,	Captain,	32	30 Thompson st.	Glass cut'r.
Oct. 31, 1882,	132	Jason L. Ballou,	1st Lieut.,	48	37 Crapo street,	Carpenter.
Oct. 31, 1882,	135	Frederick S. Nelson,	2d Lieut.,	27	142 Wash'ton st.,	Mason.
Oct. 31, 1882,	122	Herbert B. Gardner,	Clerk,	47	114 "	Composit'r.
May 8, 1884,	126	Robert N. Allen,	Hoseman,	49	Fair st., west of County,	Painter.
Oct. 31, 1882,	127	Thomas Wood,	"	47	34 Bonney st.,	Photg'ph'r.
Oct. 31, 1882,	125	Marshall S Greene,	"	39	Rivet st., near Crapo,	Mason.
Mar. 27, 1883,	128	Joseph Jackson,	"	38	59 Allen street,	Barber.
Oct 31, 1882,	133	Chas. K. Wood,	"	42	87 Acushnet av.,	Passepart't maker.
Feb. 3, 1890,	131	Chas. E. Allen,	"	25	Contemplated Hall street,	Painter.
Nov. 3, 1890,	124	James T. Galligan,	"	27	Fourth and Potomska sts.,	Clerk.
June 30, 1891,	123	John F. Rogers,	"	26	97 Acushnet av.,	Britannia worker.
May 31, 1892,	138	Michael Stapleton,	Substitute,	34	679 S. Water st.,	Clerk.
Dec. 15, 1892,	121	Chas. E. Greene,	"	20	204 County st.,	Britannia worker.
Oct. 31, 1882,	137	Chas. G. Taber,	Engineer,	45	Engine house,	Engineer.
Nov. 24, 1885,	142	Henry M. Mosher,	Stoker,	45	205 County st.,	Press worker.
Oct. 31, 1882,	134	Frank A. C. Greene,	Driver,	28	Engine house,	Engine driver.
Oct. 31, 1882,	136	N. Herbert Greene,	R'l Driver,	37	"	Hostler.

STEAM FIRE ENGINE COMPANY No. 7.

House on Durfee street. Engine built by the Manchester Locomotive Works, Manchester, N. H.; capacity, 500 gallons per minute; weight of engine as drawn to fires, 7,000 pounds. Put into service September 1, 1890. Company organized September 1, 1890.

Date of Joining.	No. of Badge.	Name.	Rank.	Age.	Residence.	Occupat'n.
Sept. 1, 1890,	196	James Slater,	Captain,	42	680 Purchase st.,	Merchant.
"	197	S. C. Lowe,	1st Lieut.,	36	Sycamore st.,	"
"	204	Edward H. Booth,	2d Lieut.,	43	35 Durfee street,	Car inspector.
"	205	Maurice C. Dahill,	Clerk,	34	70 Linden street,	Shoemaker.
"	206	John H. Ryan,	Hoseman,	35	561 Cottage st.,	Plumber.
"	198	Thomas Mack,	"	31	248 Cedar st.,	Clerk.
"	210	William Sinister,	"	27	413 "	"
"	209	Chas. A. Galligan,	"	26	567 Cottage st.,	Merchant.
"	208	James McDonnell,	"	25	130 Austin st.,	"
"	207	John D. Manseau,	"	38	30 Durfee street,	Clerk.
"	203	Geo. A. Bosworth,	"	30	9 Richmond st.,	Carpenter.
Nov. 11, 1890,	201	Crawf'd L. Dunham,	"	27	77 Willis street,	Merchant.
Sept. 1, 1890,	212	Jas. M. Whittaker,	Substitute,	29	336 Cedar street,	Clerk.
Jan. 3, 1893,	195	John N. O'Brien,	"	31	567 Cottage st.,	Merchant.
Sept. 1, 1890,	199	Jas. R. Goddard,	Engineer,	36	Engine house,	Engineer.
"	202	Andrew W. Tripp,	Stoker,	41	1 Durfee street,	Shoemaker.
"	200	William H. King,	Driver,	30	Engine house,	Hostler.
"	201	Ed. H. Coggeshall,	R'l Driver,	23	"	"

HANCOCK ENGINE COMPANY

No. 9.

House located at Acushnet. Engine built by John Agnew, of Philadelphia, in 1843. Engine removed to Acushnet, January 18, 1861, and a company was organized to man her at that time. Company reorganized December 14, 1878.

Date of Joining.	No. of Badge.	Name.	Rank.	Age.	Residence.	Occupat'n.
Dec. 14, 1878,	146	John A. Russell,	Captain,	43	Acushnet av.,	Farmer.
May 7, 1883,	147	Fr'cis P. Washburn,	1st Lieut.,	50	"	Carpenter.
Dec. 14, 1878,	160	Herbert M. Spooner,	2d Lieut.,	34	Main street,	Box maker.
Dec. 6, 1886,	145	John F. Parker,	Clerk,	24	Mill road,	Painter.
May 1, 1882,	159	Israel H. Peckham,	Suction hoseman.	51	Tarkiln H. road,	Bl'ksmith.
Dec. 14, 1878,	158	Lem. A. Washburn,	Suction hosemen.	55	Acushnet ave.,	Teamster.
"	153	William T. Gifford,	Leading hoseman,	47	Mill road,	Farmer.
Sept. 3, 1883,	151	John G. Whalon,	Leading hoseman,	32	Main street,	Box maker.
Dec. 14, 1878,	166	Eli W. Reed,	Leading hoseman,	55	Tarkiln H. road,	Teamster.
Nov. 1, 1886,	150	Job T. Haskins,	Leading hoseman,	47	Mill road,	Box maker.
Feb. 4, 1889,	161	William P. Reed,	Steward,	40	Tarkiln H. road,	Teamster.
Dec. 14, 1878,	149	John Silvia,	Brakeman,	54	Belleville road,	Shoemaker.
"	148	And. B. Grinnell, Jr.	"	54	Acushnet ave.,	Grocer.
"	152	James A. Wilber,	"	48	Mill road,	Box maker.
"	154	Joseph W. Spooner,	"	41	Acushnet av.,	Teamster.
"	165	Allen Russell, Jr.,	"	36	"	Grocer.
Dec. 4, 1882,	164	George W. Hawes,	"	40	"	Teamster.
Jan. 7, 1889,	163	Nathan C. Briggs,	"	59	"	Carpenter.
May 3, 1886,	155	George H. Gifford,	"	22	"	Grocer.
May 7, 1888,	156	John B. Wilbur,	"	22	Mill road,	Plumber.
May 31, 1892,	157	Walter H. Darling,	"	28	Main street,	Box maker.
Sept. 25, 1893,	162	Fred W. Bowles,	"	28	Acushnet av.,	Sawyer.
May 4, 1891,		Frank C. Bennett,	Substitute,	19	Howard avenue,	Bricklayer.
"		George J. Allen,	"	19	Acushnet av.,	Plumber.

HOOK AND LADDER COMPANY No. 1.

House, corner of Purchase street and Mechanics lane. Carriage built by La France Steam Fire Engine Co., Elmira, N. Y.; put into commission November 1, 1891.

Date of Joining.	No. of Badge.	Name.	Rank.	Age.	Residence.	Occupat'n.
Jan. 27, 1890,	104	Philip C. Russell,	Captain,	31	4 Walnut street,	Stereotyper.
Sept. 26, 1887,	100	Loren N. Mosher,	1st Lieut.,	36	30 Elm steeet,	Electrician.
Jan. 5, 1884,	101	Frank Spooner,	2d Lieut.,	38	85 Sycamore st.,	Painter.
May 30, 1874,	89	Charles E. Pierce,	Clerk,	46	117 Willis street,	Printer.
Aug. 1, 1879,	96	Nath'l H. Caswell,	Ladderm'n,	46	20 Madison st.,	Bl'ksmith.
Jan. 31, 1870,	87	Lysander W. Davis,	"	58	106 Chestnut st.,	Carpenter.
June 24, 1883,	105	Edward D. Francis,	"	38	86 Kempton st.,	Shoemaker.
June 24, 1889,	91	Wm. L. Fletcher,	Axeman,	28	38 Cedar st.,	Machinist.
Nov. 29, 1886,	103	Alfred M. Gifford,	Ladderm'n,	30	33 S. Second st.,	Teamster.
Aug. 5, 1865,	102	Chas. J. Johnson,	"	60	23 Locust street,	Spar maker.
Jan. 26, 1891,	88	Chas. P. Johnson,	"	35	72 First street,	Mechanic.
Oct. 26, 1863,	90	Abram R. Luscomb,	"	55	42 Parker street,	Laborer.
June 24, 1889,	107	William R. Russell,	Axeman,	28	4 Walnut street,	Orn'ment'r.
Aug. 7, 1863,	86	Philip M. Tripp,	Ladderm'n,	55	102 Ash street,	Teamster.
May 26, 1890,	106	Wm. W. Brannan,	Substitute,	24	88 High street,	Clerk.
July 25, 1890,	98	George A. Caswell,	"	23	20 Madison st.,	Mechanic.
Sept. 1, 1888,	93	George S. Allen,	Driver,	33	303 Acushnet av.	Hostler.
May 13, 1893,	97	Chas. A. Haskins,	Tillerman,	26	36 Kempton st.,	

HOOK AND LADDER COMPANY No. 2.

House on Weld street. Carriage built by Joseph T. Ryan, of Boston; put into commission August 4, 1877. Present company organized September, 1888.

Date of Joining.	No. of Badge.	Name.	Rank.	Age.	Residence.	Occupat'n.
Sept. 1, 1888,	172	Edward F. Dahill,	Captain,	31	49 Austin street,	Shoe merchant.
"	175	Martin H. Sullivan,	1st. Lieut.,	36	1017 Purchase st.	Contractor.
"	179	William McCann,	2d Lieut.,	33	198 N. Front st.,	Pedler.
May 1, 1890,	184	Frank R. Pease,	Clerk,	36	923 Acushnet av.	Druggist.
Sept. 1, 1888,	171	Henry W. Kenyon,	Poleman,	51	910 "	Retired.
"	180	Peter F. Sullivan,	Ladderm'n,	33	New County, near Linden.	Grocer.
"	176	John W. Bannister,	"	32	194 Pleasant st.,	Salesman.
"	177	John S Harrington,	Axeman,	34	451 Pleasant st.	Baker.
"	178	David Warren,	"	37	257 State street,	Stableman.
"	183	Jerry T. Haggerty,	Ladderm'n,	25	33 Reynolds st.,	"
Mar. 1, 1892,	173	William Sellick,	Poleman,	26	907 Acushnet av.	Gardener.
Sept. 1, 1892,	174	Charles H. McCarty,	Ladderm'n,	24	State and Clark sts.,	Baker.
"	182	Henry Lenhardt,	Substitute,	21	Acushnet ave.,	Grocer.
Sept. 8, 1893,	181	Michael McDonnell,	"	26	128 Austin st.,	Grocer,
Oct. 28, 1893,		Ernest A. Allen,	Driver,	27	Engine house,	Hostler.

HOOK AND LADDER COMPANY No. 3.

House on Fourth street, head of Potomska. Carriage built by La France Steam Fire Engine Co., Elmira, N. Y.; put into commission August 30, 1888. Present company organized November 1, 1891.

Date of Joining.	No. of Badge.	Name.	Rank.	Age.	Residence.	Occupat'n.
Nov. 1, 1891,	217	E. E. Enos,	Captain,	30	827 S. Water st.,	Druggist.
"	218	John O'Neil,	1st Lieut.,	29	30 Thompson st.,	Glasscutt'r.
"	219	Daniel E. Nelson,	2d Lieut.,	29	200 S. Second st.,	Mason.
"	226	Charles B. Church,	Clerk,	22	256 Fourth st.,	Fish dealer.
"	220	John J. Meaney,	Ladderm'n,	24	W. French av.,	Carpenter.
"	221	Henry Chase,	"	29	167 Grinnell st.,	Painter.
"	222	Henry R. Lindsey,	Axeman,	31	County and Rockland sts.	Carpenter.
"	223	Robert W. Cooke,	Ladderm'n,	25	273 Fourth st.,	Baker.
"	224	James R. Gifford,	Axeman,	31	34 Thompson st.,	Lineman.
Feb. 1, 1892,	225	Stephen J. Cassidy,	Ladderm'n,	28	1 Hall street,	Painter.
Nov. 1, 1891,	229	George Baylies,	"	22	273 Fourth st.,	"
"	228	Harry Ricketson,	"	27	5 Warwick st.,	Spoon maker.
Dec. 5, 1892,	230	Ernest McCarthy,	Substitute,	25	109 Potomska st.	Tool maker.
1893,	227	Manuel Francis,	"	29	169 S. Second st.,	Teamster.
Aug. 1, 1892,	232	John H. Donaghy,	Driver,	28	Engine house,	Hostler.
Nov. 1, 1891,	231	Henry J. Marshall,	Tillerman,	30	"	

HOSE COMPANY No. 1.

House, corner of Purchase street and Mechanics lane. Wagon built by Brownell, Ashley & Co., New Bedford; put into commission December 1, 1888. Company organized December 31, 1871.

Date of Joining.	No. of Badge.	Name.	Rank.	Age.	Residence.	Occupat'n.
Dec. 1, 1888,	82	John W. Baker,	Captain,	32	46 Hill street,	Carpenter.
"	78	Aug. G. Mitchell,	1st Lieut.,	37	134 N. Second st.	Salesman.
Oct. 28, 1889,	80	William H. Young,	2d Lieut.,	33	52 Russell st.,	Glass worker.
Dec. 1, 1888,	81	James S. Hathaway,	Clerk,	63	496 Acushnet av.	Boat builder.
"	83	David W. Howland,	Hoseman,	57	219 Kempton st.,	Bl'ksmith.
"	79	Chas. T. Maxfield,	"	30	49 Mechanics lane,	Printer.
"	85	John B. Oliver,	"	29	263 Cottage st.,	Bl'ksmith.
Aug. 7, 1893,	120	Wm. H. B. Harlow,	Substitute,	21	82 Elm street,	Clerk.
June 25, 1893,	84	Roland A. Hatch,	Driver,	26	Engine house,	Hostler.

HOSE COMPANY No. 2.

House on Weld street. Carriage built by the Amoskeag Manufacturing Co., Manchester, N. H.; put into service January 1, 1872. Present company organized December 3, 1888.

Date of Joining.	No. of Badge.	Name.	Rank.	Age.	Residence.	Occupat'n.
Dec. 3, 1888,	186	Joseph Dawson,	Captain,	33	Purchase street,	Salesman.
"	187	Mark Watson,	1st Lieut.,	34	990 Purchase st.,	"
"	188	Stephen L. Finnell,	2d Lieut.,	34	17 Reynolds st.,	"
"	192	George C. Hewins,	Clerk,	22	762 County st.,	Engineer.
"	189	Bart. P. Fury,	Hoseman,	29	413 Purchase st.,	Salesman.
"	190	Frank E. Foley,	"	26	259 State street,	Baker.
April 16, 1884,	191	William Wolfenden,	"	24	399 Pleasant st.,	Barber.
Aug. 1, 1893,	193	John Watson,	Substitute,	35	State street,	Clerk.
Dec. 3, 1888,	194	Reuben Taber,	Driver,	38	Engine house,	Hostler.

NEW BEDFORD PROTECTING SOCIETY.

President, Charles S. Kelley; First Director, Jonathan Handy; Second Director, William A. Robinson; Third Director, Charles H. Lawton; Fourth Director, Edward T. Pierce; Fifth Director, Charles M. Haskell; Sixth Director, Edmund F. Maxfield; Seventh Director, Edmund Wood; Eighth Director, John H. Lowe; Secretary and Treasurer, Edmond L. Wilde.

Francis T. Akin,
Gilbert Allen,
Gideon Allen, Jr.,
George H. H. Allen,
James H. Bamford,
William Bamford,
Lewis E. Bentley,
O. Frank Bly,
Standish Bourne,
George E. Briggs,
Charles A. Case,
R. C. P. Coggeshall,
Clifton H. Cornish,
Edwin Dews,
Henry C. Denison,
Ernest A. Dunham,
Joseph Dias,
John Eldridge, Jr.,
Walter F. Field,
Edward R. Gardner,
John E. Gibbs,
Frank H. Gifford,
Charles H. Gifford,
A. W. Hadley,
Charles H. Holden,
John J. Howland,
Charles M. Hussey,
Henry F. Hammond,
Henry Howard,
Thomas H. Knowles,
G. D. Kingman,
Edgar R. Lewis,
Philander F. Manchester,
Frederick B. Macy,
Willard Nye, Jr.,
Otis N. Peirce,
William F. Potter,
James N. Parker,
William H. Pitman,
Charles L. Paine,
Stephen D. Peirce,
George A. Phillips,
William F. Read,
Morgan Rotch,
Arthur E. Robbins,
Louis H. Richardson,
Gardner T. Sanford,
Frank E. Sawin,
R. W. Swift,
Frederick Swift,
Leander H. Swift,
S. Edward Shaw,
Robert Snow,
Charles M. Taber,
William T. Taylor,
Henry W. Taylor,
Alfred Thornton,
Augustus C. Tripp,
Alfred G. Wilbor,
William H. Willis,
Horace Wood,
Frederick A. Washburn,
Thomas F. Wood,
William R. West,
Mark T. Vincent.

Fire Alarms, Losses, and Insurance for 1893.

The loss by fire for the year ending Dec. 31, 1893, was $94,516.21. Amount of insurance, $231,375. Number of bell alarms, 55. Number of still and telephone alarms, 54. Total alarms, 109.

Jan. 7. (Telephone.) Chimney fire in dwelling house on Hawthorn street, owned and occupied by Mrs. L. A. Plummer. Responded to by men from No. 4 engine house. No loss.

Jan. 7. (Telephone.) Chimney fire in dwelling house on North street, owned and occupied by Mrs. Henry G. Taber. Responded to by men from Central engine house. No loss.

Jan. 7. (Telephone.) Chimney fire in dwelling house on Acushnet avenue, owned and occupied by Thomas Donaghy. Responded to by men from No. 6 engine house. No loss.

Jan. 7. (Telephone.) Chimney fire in bakery on Mill street, occupied by John P. York. Responded to by men from No. 5 engine house. No loss.

Jan. 8. (Still.) Chimney fire in dwelling house on Mill street, occupied by Clarfus Vansant. Responded to by men from Central engine house. No loss.

Jan. 16. (Telephone.) Chimney fire in dwelling house corner of Orchard and Clinton streets, owned by heirs of Dr. J. H. Jennings, and occupied by Andrew H. Potter. Responded to by men from Central engine house. No loss.

Jan. 16. (Telephone) Slight fire in store on Hazard street, owned and occupied by Benjamin Dawson. Caused by plumbers thawing out pipes. Responded to by men from No. 1 engine house. No loss.

Jan. 16. (Still.) Fire in shoe store 806 Purchase street, occupied by Allen Firth. Caused by falling of hanging lamp. Extinguished by outside help. No loss.

Jan. 21. (Telephone.) Fire in barber shop on Middle street, owned by Dr. S. W. Hayes and occupied by Marcellus Costello. Caused by overheated stove. Responded to by men from Central engine house. No loss.

Jan. 21. (Telephone.) Fire in dwelling house 36 Elm street, owned by heirs of George Hastings, and occupied by William Hobart. Caused by plumbers thawing out pipes. Responded to by men from Central engine house. No loss.

Jan. 21. (Telephone.) Fire in barn on Elm street, owned by F. W. Oesting, and occupied by Charles F. Perry. Caused by overheated oil stove. Responded to by men from Central engine house. No loss.

Jan. 26, 3.30 P. M. Box 125. Fire in dwelling house corner of Blackburn and Cedar Grove streets, occupied by John Slater. Cause unknown. Companies responding: Engines 1 and 7, Hook and Ladder 2, and Hose 2. No loss.

Jan. 28, 8.20 A. M. Box 45. Fire in junk store on Allen street, owned and occupied by William Taylor. Caused by spark from stove. Companies responding: Engines 4 and 6, Hook and Ladder 3, and Hose 1. Loss on building, $15. Loss on contents, $15. No insurance.

Feb. 9. Chimney fire in dwelling house corner of Sixth and Russell streets, owned and occupied by Mrs. Josiah Holmes. Responded to by men from No. 4 engine house. No loss.

Feb. 11, 5.50 P. M. Box 226. Fire in building on Rodman street, owned by David B. Kempton and Rodolphus Beetle, and occupied by D. J. Russell, cabinet maker; F. W. Deane, upholsterer, and Brightman Bros., paint manufacturers. Cause unknown. Companies responding: Engines 2 and 4, Hook and Ladder 1, and Hose 1. Loss on building, $382; insurance, $700. D. J. Russell's loss, $1,752.39; insurance, $600. F. W. Deane's loss, $600; insurance, $600. Brightman Bros.' loss, $998.01; insurance, $4,000.

Feb. 13, 12.45 A. M. Box 27. Fire in Mount Pleasant House on Pleasant street, owned by Masonic Building Association, and occupied by Mr. Alonzo B. Chase. Cause, sparks from furnace. Companies responding: Engines 2 and 4, Hook and Ladder 1, and Hose 1. Loss on building, $1,000; insurance, $2,000. Loss on contents, $688; insurance, $1,000.

Feb. 13. Box 24. Fire in rear of carpenter shop on Kempton street, occupied by Mr. Coldwell. Cause unknown. Companies responding: Engines 5 and 7, Hook and Ladder 1, and Hose 1. No loss.

Feb. 17. (Telephone.) Chimney fire in dwelling house corner of Maxfield and North Second streets, owned by the New Bedford Manufacturing Co. Responded to by men from Central engine house. No loss.

Feb. 18. (Telephone.) Fire in office in Robeson Building, occupied by Thomas West. Caused by papers in register pipe. Responded to by men from Central engine house. No loss.

Feb. 20, 10.50 A. M. Fire in dry goods store on Purchase street, owned by Charles W. Brownell and Frederick Parker, and occupied by Thomas Moynan. Caused by overheated stove. Companies responding: Engines 2 and 4, Hook and Ladder 1, and Hose 1. Loss on building, $1,144; insurance, $8,000. Loss on stock, $13,014.09; insurance, $73,500.

Feb. 25. Box 58. Fire in dwelling house on Middle Point road, occupied by James Betteridge. Cause, defective chimney. Companies responding: Engines 4 and 6, Hook and Ladder 3, and Hose 1. Loss, $1,000; insurance, $1,000.

March 4. (Telephone.) Chimney fire in dwelling house on Orchard street, owned and occupied by Thomas M. Hart. Responded to by men from No. 4 engine house. No loss.

March 8. (Telephone.) Fire in building owned by Merchants Bank, and occupied by J. Kelley & Son and others. Cause, electric light wires. Responded to by men from Central engine house. No loss.

March 13. Chimney fire in dwelling house on Green street, owned and occupied by Arthur Howland. Responded to by men from No. 4 engine house. No loss.

March 17. Chimney fire in house on Belleville avenue, owned and occupied by Frederick A. Willis. Responded to by men from Weld street house. No loss.

March 23, 2.50 P. M. Box 17. Fire in house corner of North Second and Maxfield streets, occupied by Mrs. Ellen Jefferson. Caused by apples drying on stove catching fire. Companies responding: Engines 1 and 5, Hook and Ladder 1, and Hose 1. No loss.

March 23, 10 P. M. Box 57. Fire originated in house in process of erection on south side of Nelson street, owned by Joshua Garside. Houses on both sides, owned by William Watkins, Cyril Mayhew and Mrs. B. Haggerty, and occupied by Cyril Mayhew, Joseph Stevenson and Mrs. L. Church were badly scorched. Cause, incendiary. Companies responding: Engines 4 and 6, Hook and Ladder 3, and Hose 1. Loss on buildings, $2,104; insurance, $7,000.

March 30. (Telephone.) Fire in woods near Nash road. Responded to by men from Weld street engine house. No loss.

March 31, 9.20 P. M. Box 24. Fire in bakery No. 384 Kempton street, owned by Edward Johnson, and occupied by C. T. Williams. Cause, defective chimney. Responded to by Engines 5 and 7, Hook and Ladder 1, and Hose 1. Loss on building, $200; insured for $300. Loss on contents, $70.07; insurance, $200.

March 31, 10 P. M. (Telephone.) Fire in hall on Acushnet avenue, owned by Clark Green, and occupied by Salvation Army. Cause, falling of hanging lamp. Responded to by men from Central engine house. No loss.

April 2. (Telephone.) Fire in woods on Mt. Pleasant and Nash roads. Extinguished by men from No. 7 engine house. No loss.

April 2, 9 P. M. (Telephone.) Chimney fire in dwelling house on Nash road, owned by Mr. King. Responded to by men from No. 7 engine house. No loss.

April 7, 3.30 P. M. Box 127. Fire in dwelling house on Pleasant street, owned and occupied by Mrs. Joseph Dailey. Caused by children playing with fire. Companies responding: Engines 1 and 7, Hook and Ladder 2, and Hose 2. Loss on building, $28; insurance, $1,600. Loss on contents, $16.50; insurance, $500.

April 7, 4.30 P. M. (Still.) Chimney fire in dwelling house No. 386 Kempton street, owned by Edward Johnson, and occupied by Daniel J. Humphrey. Responded to by men from No. 5 engine house. No loss.

April 14, 10.30 A. M. (Telephone.) Chimney fire in dwelling house No. 184 Kempton street, occupied by O. B. Davis. Responded to by men from Central engine house. No loss.

April 17, 6.30 P. M. Box 14. Fire in dressmaker's shop on Purchase street, near Campbell, owned by heirs of C. Waite, and occupied by Mrs. Nellie M. Le Vasseur. Caused by overheated lamp. Responded to by Engines 1 and 2, Hook and Ladder 1, and Hose 1. Loss on contents, $150; insurance, $600.

April 21, 5 P. M. (Still.) Fire in house No. 69 Bedford street, owned and occupied by Charles Kern. Cause, gas explosion. Responded to by men from No. 4 engine house. No loss.

April 22. Box 23. Fire in ice houses west of Rockdale avenue, owned and occupied by Pardon Russell, Jr. Cause unknown. Responded to by Engines 5 and 7, Hook and Ladder 1, and Hose 1. Loss on buildings, $3,000; insurance, $3,000. Loss on contents, $4,500; insurance, $5,000.

April 23, 4 P. M. (Still.) Fire in woods on Point road, owned and occupied by United States government. Responded to by men from No. 4 engine house. No loss.

May 1. (Telephone.) Chimney fire in house on Lincoln street, owned and occupied by William A. Church. Responded to by men from No. 4 engine house. No loss.

May 3, 5.40 A. M. Box 35. Fire in house northeast corner of School and First streets, owned by James McCluskey, and occupied by Mary Delany. Cause, monkey and oil lamp. Companies responding: Engines 2 and 4, Hook and Ladder 1, and Hose 1. Loss on building, $300; no insurance. Loss on contents, $1,025; insurance, $2,000.

May 3, 8 A. M. Box 57. Fire in dwelling house on South Second street, near Delano, owned by John Foye. Cause unknown. Companies responding: Engines 4 and 6, Hook and Ladder 3, and Hose 1. No loss.

May 5. (Telephone.) Chimney fire in house on Mt. Pleasant street, owned and occupied by Seth E. Bryant. Responded to by men from No. 7 engine house. No loss.

May 14. (Telephone.) Chimney fire in house on Spring street, occupied by John Southwick. Responded to by men from No. 4 engine house. No loss.

May 17. Box 65. Fire in shoe factory of Hathaway, Soule & Harrington. Cause, soot in chimney. Companies responding: Engines 1, 2 and 5, Hook and Ladder 1 and 2, and Hose 1. No loss.

May 23, 3 P. M. Box 53. Fire in dwelling house on Rivet and Crapo streets, owned and occupied by Marshall S. Green. Cause, overturned oil stove. Responded to by Engines 4 and 6, Hook and Ladder 3, and Hose 1. No loss.

May 22, 12.10 P. M. (Still.) Fire in house No. 146 Smith street, owned by Mrs. S. Magee, and occupied by G. H. Cunningham. Cause, explosion of oil stove. Responded to by men from No. 5 engine house. No loss.

May 25, 8.35 A. M. Box 39. Fire in shed rear of 317 South Water street, owned by John Fraizer. Caused by children playing with matches. Responded to by Engines 4 and 6, Hook and Ladder 3, and Hose 1. No loss.

May 25, 11.50 P. M. Box 48. Fire in photograph saloon on South Water street, occupied by Starr Bros., spreading to house and store next to it owned by Pardon Cornell, and occupied by Mrs. Louisa Frates. Cause, explosion of oil lamp. Companies responding: Engines 4 and 6, Hook and Ladder 3, and Hose 1. Loss on building, $2,000; no insurance. Loss on contents by Starr Bros., $1,550; insurance, $2,000. Loss on contents by L. Frates, $68; insurance, $600.

May 28, 2.40 A. M. Box 21. Fire in planing mill on Water street, owned and occupied by William H. Washburn, spreading to frame factory next south, owned by William H. Washburn, and occupied by Ullman Manufacturing Co. Cause unknown. Responded to by Engines 1, 2 and 5, Hook and Ladder 1, and Hose 1.

May 28. Box 21. Second alarm for same fire. Responded to by Engines 4 and 6, Hook and Ladder 2, and Hose 2.

May 28. Box 21. Third alarm for same fire. Responded to by Engine 7. Loss on buildings, $9,278.03; insurance, $9,574. Loss on contents, $24,192.12; insurance, $18,076.

May 31, 10.50 P. M. (Still.) Fire in fish market on Market street, belonging to estate of D. Green, and occupied by Lothrop Clark. Responded to by men from Central engine house. No loss.

June 2, 3.40 A. M. Box 28. Fire in woodshed on Park street, occupied by George Fuller. Companies responding: Engines 2 and 5, Hook and Ladder 1, and Hose 1. No loss.

June 3. (Still.) Fire in planing mill on Bowditch street, occupied by E. Terry & Son. Cause, sparks. Responded to by men from Weld street engine house. No loss.

June 4, 2.45 P. M. Box 58. Fire in some empty machine cases in rear of Hathaway Mill. Responded to by Engines 4 and 6, Hook and Ladder 3, and Hose 1. No loss.

June 6, 4 P. M. Box 5. Fire in barn on Robeson street, owned by the Church of the Sacred Heart, and occupied by Rev. J. A. Payan. Cause unknown. Companies responding: Engines 5 and 7, Hook and Ladder 2, and Hose 2. Loss on building, $75; insurance, $600.

June 8, 3 P. M. (Still.) Fire in dye house on Purchase street, near Merrimac, occupied by North End Dye Co. Cause, spontaneous combustion. Responded to by men from No. 1 engine house. No loss.

June 17, 8.30 P. M. Box 127. Fire in hardware store on Purchase street, owned by A. Davis Ashley, and occupied by Otheman and Dunham. Caused by falling of hanging lamp. Companies responding: Engines 1 and 7, Hook and Ladder 2, and Hose 2. No loss.

June 24. Box 36. Fire in dwelling house corner of First and Walnut streets, owned by Peter Scott, and occupied by Peter Scott and Joseph Perry. Cause unknown. Companies responding: Engines 2 and 4, Hook and Ladder 1, and Hose 1. Loss on building, $25; no insurance. While responding to this alarm William P. Sowle, driver of steamer 2, was thrown from his engine, run over and killed.

July 3. Box 3. Fire in dwelling house on Tarkiln Hill road, owned and occupied by Henry White. Responded to by Engine 9, and men from No. 7 engine house. Loss, $50; no insurance.

July 4, 2.30 P. M. (Still.) Fire in woodhouse No. 44 Sixth street, owned and occupied by C. H. Church. Caused by fire crackers. Responded to by men from No. 4 engine house. No loss.

July 5, 11.30 P. M. Box 23. Fire in grocery store corner of Kempton street and Rockdale avenue, occupied by C. H. Brownell. Caused by electric wires. Responded to by Engines 5 and 7, Hook and Ladder 1, and Hose 1. No loss.

July 7. (Still.) Fire in Hathaway Mills. Responded to by men from No. 4 engine house. No loss.

July 11, 10.40 A. M. Box 34. Fire in building on Union street, owned by Taber Wharf Co., and occupied as a wholesale grocery store by W. F. Potter & Co. Cause unknown. Companies responding: Engines 2 and 4, Hook and Ladder 1, and Hose 1.

July 11, 10.45 A. M. Second alarm for same fire. Companies responding: Engines 5 and 6, Hook and Ladder 3. Loss on building, $2,032; insurance, $4,000. Loss on contents, $13,173.60; insurance, $29,000.

July 16, 4.40 P. M. Box 53. Fire in barn on Crapo street, belonging to Peter Crapo. Caused by boys. Companies responding: Engines 4 and 6, Hook and Ladder 3, and Hose 1. No loss.

July 21, 6 A. M. (Still.) Fire in drug store corner of Purchase and Weld streets, occupied by J. F. Webster. Responded to by men from Weld street engine house. No loss.

Aug. 5, 9.55 P. M. Box 123. Fire in carpenter shop on Coffin avenue, owned and occupied by Carl Shegel. Cause, incendiary. Responded to by Engines 1 and 7, Hook and Ladder 2, and Hose 2. Loss on building, $100; insurance, $100. Loss on contents, $250; insurance, $250.

Aug. 9, 7 P. M. Box 46. Fire in dwelling house No. 483 South Water street, occupied by Enos Douglass. Caused by lighted match dropped in waste. Companies responding: Engines 4 and 6, Hook and Ladder 3, and Hose 1. No loss.

Aug. 10, 2.48 P. M. Box 56. Fire in dwelling house corner of Front and Delano streets. Cause, overheated pipe. Companies responding: Engines 4 and 6, Hook and Ladder 3, and Hose 1. No loss.

Aug. 17, 12.15 P. M. (Still.) Fire on New Bedford and Fairhaven bridge. Caused by lighted cigar stump. Responded to by men from Central engine house. No loss.

Aug. 26, 10.55 P. M. (Still.) Fire in dwelling house No. 356 Pleasant street, owned by Thomas O'Neil, and occupied by Charles Pine. Caused by explosion of lamp. Responded to by men from No. 1 engine house. Loss, $15; no insurance.

Aug. 31, 2.30 P. M. (Still.) Fire in blacksmith shop on Pleasant street, owned and occupied by A. E. Hathaway. Caused by sparks from chimney. Responded to by men from Central engine house. No loss.

Sept. 6, 5 P. M. Box 36. This alarm was given on account of fire in Lawton House barn, South Dartmouth, and engine 4 was sent to the scene.

Sept. 9, 5 A. M. Box 21. Fire in foundry rear of North and Water streets, owned and occupied by Augustus Swift. Companies responding: Engines 1, 2 and 5, Hook and Ladder 1, and Hose 1. No loss.

Sept. 8, 9.30 P. M. Box 123. Fire in building corner of Bowditch street and Coffin avenue, owned by George Saxon, and occupied by the North Baptist Society as a chapel and John Champion as a tenement. Caused by explosion of lamp. Companies responding: Engines 1 and 7, Hook and Ladder 2, and Hose 2. Loss trivial.

Sept. 28, 11.30 P. M. Box 123. Fire on same premises as preceding fire. Caused by unextinguished sparks from first fire. Companies responding: Engines 1 and 7, Hook and Ladder 2, and Hose 2. Loss on building, $650; insurance, $1,600. Loss on contents, $310; insurance, $600.

Sept. 9, 10 A. M. Box 16. Fire in St. Lawrence church on County street. Cause unknown. Companies responding: Engines 5 and 7, Hook and Ladder 1, and Hose 1. Loss on building, $1,000; insurance, $20,000. Loss on contents, $1,000; insurance, $1,000.

Sept. 11, 12 M. Box 26. Fire in dwelling house corner of Middle and Water streets, occupied by Mary Costa. Cause, defective chimney. Companies responding: Engines 1, 2 and 5, Hook and Ladder 1, and Hose 1. No loss.

Sept. 14, 1 A. M. (Still.) Fire in stable corner of Sycamore and Summer streets, occupied by Edward M. Pierce. Caused by explosion of lamp. Responded to by men from No. 5 engine house. No loss.

Sept. 13, 7.15 A. M. (Still.) Chimney fire in dwelling house corner of High and Second streets, owned by Rodolphus Beetle, and occupied by Mrs. Allen. Responded to by men from Central engine house. No loss.

Sept. 23. Box 29. Fire in dwelling house No. 186 Arnold street, owned by Philip Lowe, and occupied by John Dunn. Caused by explosion of oil stove. Companies responding: Engines 4 and 5, Hook and Ladder 1, and Hose 1. No loss.

Sept. 23. (Still.) Fire in Grinnell Mills block, owned by Grinnell Manufacturing Co., and occupied by French family. Caused by overheated fat. Responded to by men from Weld street engine house. No loss.

Sept. 28, 4.45 P. M. Box 29. Fire in dwelling house on Arnold street, occupied by Mrs. Young. Cause, defective chimney. Companies responding: Engines 4 and 5, Hook and Ladder 1, and Hose 1. No loss.

Oct. 2. Chimney fire in grocery store on Purchase street, owned by Mrs. Branscomb, and occupied by Charles S. Davis. Responded to by men from No. 1 engine house. No loss.

Oct. 7, 7.20 A. M. Box 7. Fire in dwelling house No. 496 Purchase street, owned by James L. Hathaway, and occupied by Ernest Sears and William Burroughs. Caused by boy playing with matches. Companies responding: Engines 1 and 7, Hook and Ladder 2, and Hose 2. Loss on building, $148.28; insurance, $2,000. Loss on contents, $115; insurance, $1,200.

Oct. 13, 5 P. M. Box 12. Fire in dwelling house 190 Shawmut avenue, owned and occupied by Lafayette Grant. Cause, overheated stove. Companies responding: Engines 5 and 7, Hook and Ladder 2, and Hose 2. No loss.

Oct. 19. Fire in box of rubbish. Companies responding: Engines 4 and 6, Hook and Ladder 3, and Hose 1. No loss.

Oct. 20, 8.30 A. M. Box 125. Fire in building corner of Weld street and Acushnet avenue, owned by Considine Brothers, and occupied by Thomas Burgess & Son, grocers; William A. Gurney, hay and grain dealer, and Frank T. Bentley as a tenement. Cause, overheated stove. Companies responding: Engines 1 and 7, Hook and Ladder 2, and Hose 2. Loss on building, $1,800; insurance, $2,800. Loss on contents by W. A. Gurney, $554.49; insurance, $975. Loss on contents by F. T. Bentley, $181; insurance, $500. Loss on contents by T. Burgess & Son, $562; insurance, $1,500.

Oct. 20. (Still.) Fire in Cummings' Building, owned by Cummings estate, and occupied by C. S. & B. Cummings and others. Caused by leaky gas pipe. Responded to by men from Central engine house. No loss.

Oct. 27, 4.50 P. M. Box 57. Fire in dwelling house No. 22 Katharine street. Caused by oil stove. Companies responding: Engines 4 and 6, Hook and Ladder 3, and Hose 1. No loss.

Nov. 8. (Still.) Fire in dwelling house No. 842 County street. Caused by wood box too near stove. Responded to by men from No. 7 engine house. No loss.

Nov. 10, 7.30 P. M. Box 52. Fire in boarding house on Acushnet avenue, owned by F. W. Oesting, and occupied by Isabella Higginson. Cause, leakage of oil. Companies responding: Engines 4 and 6, Hook and Ladder 3, and Hose 1. Loss on building, $850; insurance, $3,000. Loss on contents, $77.25; insurance, $1,000.

Nov. 15. (Telephone.) Chimney fire in dwelling house on Cottage street, owned and occupied by Eliot D. Stetson. Responded to by men from No. 4 engine house. No loss.

Nov. 17, 6.50 P. M. Box 27. Fire in building corner of Elm and Pleasant streets, owned by heirs of Alfred M. Chapman, and occupied as a tenement by Edward T. Chapman and a carriage factory by Thomas Dexter. Cause unknown. Companies responding: Engines 2 and 4, Hook and Ladder 1, and Hose 1. Loss on building, $579.20; insurance, $4,000. Loss on contents, $233.75; insurance, $1,500.

Nov. 22. Box 12. Fire in dwelling house on Shawmut avenue, owned by Joseph Gero, and occupied by Joseph Gero and George Rogers. Cause, defective chimney. Companies responding: Engines 5 and 7, Hook and Ladder 2, and Hose 2. Loss on building, $254; insurance, $2,000. Loss on contents, $264; insurance, $800.

Nov. 22. (Still.) Fire in dwelling house corner of Parker aud Summer streets, owned and occupied by George Priestly. Caused by defective chimney. Responded to by men from No. 5 engine house. Loss on building, $63.93; insurance, $2,500.

Nov. 24. Box 17. Fire in building 535 Acushnet avenue, owned by Eunice Green. Caused by oil stove. Companies responding: Engines 1 and 5, Hook and Ladder 1, and Hose 1. No loss.

Nov. 25, 11 A. M. (Still.) Chimney fire in dwelling house 670 County street, owned and occupied by Rodolphus Beetle. Responded to by men from No. 5 engine house. No loss.

Nov. 29, 11.45 A. M. (Still.) Chimney fire in dwelling house on County street, owned and occupied by Dr. E. P. Abbe. Responded to by men from No. 4 engine house. No loss.

Dec. 9. (Still.) Fire on New Bedford and Fairhaven bridge. Caused by electric wires. Responded to by men from Central engine house. No loss.

Dec. 9. (Still.) Chimney fire in house 97 Elm street, occupied by George R. Phillips. Responded to by men from Central engine house. No loss.

Dec. 19. Box. 53. Fire in dwelling house, No. 7 Larch street, owned and occupied by Oliver Smith. Caused by wood box being too near stove. Companies responding: Engines 4 and 6, Hook and Ladder 3, and Hose 1. Loss on Building, $40, insurance, $1000. Loss on contents, $175; insurance, $500.

Dec. 25. Box 52. Fire in dwelling house owned by S. S. Pollock and occupied by John M. Case. Caused by overheated stove. Companies responding: Engines 4 and 6, Hook and Ladder 3, and Hose 1. Loss on building, $99; insurance, $1,000. Loss on contents, $175; insurance, $1,000.

Dec. 27, 5.35 P. M. Box 28. Fire in dwelling house on Court and Cedar streets, owned and occupied by F. M. Douglass. Caused by hot ashes near furnace. Companies responding: Engines 2 and 5, Hook and Ladder 1, and Hose 1. Loss on building, $348.50; insurance, $2,000. Loss on contents, $225; insurance, $2,000.

Dec. 27, 6 P. M. (Still). Chimney fire in house on Prospect street. Responded to by men from No. 4 engine house. No loss.

Dec. 27, 7.15 P. M. (Still). Chimney fire in dwelling house on Grove street, owned and occupied by Andrew Ingraham. Responded to by men from No. 4 engine house. No loss.

Dec. 30, 12.15 P. M. (Still). Chimney fire in house corner of Cottage and Grove streets, owned and occupied by heirs of Lawrence Grinnell. Responded to by men from No. 4 engine house. No loss.

The following is the amount of losses by fire in this city for the past seventeen years, together with the amount of insurance on same:

Years.	Loss.	Insurance.
1877,	$26,063.66	$21,528.36
1878,	28,154.46	66,025.00
1879,	9,163.16	54,950.00
1880,	7,609.13	49,450.00
1881,	26,624.96	86,979.00
1882,	23,169.64	692,950.00
1883,	17,398.14	77,450.00
1884,	134,729.82	310,950.00
1885,	6,982.41	148,025.00
1886,	26,786.03	1,108,800.00
1887,	45,141.50	708,150.00
1888,	32,881.87	125,927.00
1889,	42,285.71	182,772.00
1890,	18,145.02	71,300.00
1891,	43,032.65	297,487.13
1892,	73,947.46	271,710.00
1893,	94,516.21	231,375.00

Fire Alarm Telegraph, 1893.

SUPERINTENDENT.

FREDERICK MACY, Chief Engineer.

ASSISTANT SUPERINTENDENT.

DANIEL D. BRIGGS.

Residence, 43 Bedford street; Office, City Hall.

LOCATION OF SIGNAL BOXES.

No 3. Lund's Corner.
4. Acushnet Heights, near reservoir.
123. Acushnet avenue, near Coffin avenue.
124. Acushnet avenue and Sawyer street.
125. Corner Bowditch and Weld streets.
126. Cedar Grove and North Front streets.
127. Purchase and Linden streets.
128. County and Penniman streets.
134. Belleville avenue and Nye street.
135. Belleville avenue and Coggeshall street.
5. Linden and Ashland streets.
6. Hazard and State streets.
7. Purchase and Franklin streets.
8. County and Pearl streets.
9. Wamsutta street and Acushnet avenue.
12. Shawmut avenue and Durfee street.
13. Cedar and Locust streets.
14. Purchase and Willis streets.
15. Smith and Cedar streets.

16. County and Hillman streets.
17. Maxfield street and Acushnet avenue.
18. Purchase and North streets.
21. North and Water streets.
23. Kempton, west of Florence street.
24. Kempton and Cedar streets.
25. County and Kempton streets.
26. Water and Middle streets.
27. Purchase street and Mechanics lane.
28. Court and Cedar streets.
29. Arnold and Ash streets.
31. Acushnet avenue and Union street.
32. Union and Eighth streets.
34. Union and Water streets.
35. Fourth and School streets.
36. Walnut and Water streets.
37. Madison and Orchard streets.
38. Bedford and Sixth streets.
39. Acushnet avenue and Cannon street.
41. Hawthorn and Page streets.
45. Allen and Bonney streets.
46. South Water and Leonard streets.
47. Junction of Sixth and County streets.
48. Water and South streets.
51. Dartmouth and Rockland streets.
52. Fourth street, head of Potomska.
53. Crapo and Rivet streets.
56. South Water and Rivet streets.
57. Mosher and County streets.
58. South Water and Cove streets.
223. Court and Tremont streets.
226. Rodman and Front streets.
*61. Union Street Railway Horse Car Stables.
*62. Grinnell Mill.
*63. Wamsutta Mills.
*64. New Bedford Manufacturing Co.
*65. Hathaway, Soule & Harrington.
*67. New Bedford Cordage Factory.
*68. New Bedford Copper Works.
*71. Pairpoint Manufacturing Co.
*72. George Delano's Sons & Co.'s Works.
*73. Potomska Mills.
*74. Acushnet Mills.
*75. Morse Twist Drill Co.
*76. City Manufacturing Co.

*81. Howland Mills.
*82. Hathaway Mill.
*83. Rotch Mill.
*84. Iron Foundry, foot of Cannon street.
*85. New Bedford Gas Works.
*86. Old Colony Steamboat Co.
*91. Bennett Mills.
*92. New Bedford Casket Co.
*93. Pierce Mills.
*94. Old Colony Freight Depot, Pearl street.
*95. Bristol Mills.
*96. Columbia Mills.

* Private boxes, only to be rung for fire on the premises.

List of Fire Alarm Keys for 1893.

1 S. C. Hart's residence.
2 A. C. Tripp.
3 David Moncrief.
4 Engine house No. 1.
5 George A. Bourne.
6 Andrew M. Swift.
7 Silas Dammon.
8 Engine house No. 5.
9 Chief Engineer's office.
10 H. H. Fisher.
11 Store N. W. cor. Kempton and Cedar.
12 Lost.
13 Returned to Chief Engineer.
14 Engine house No. 2.
15 County jail office.
16 J. D. Thompson's residence.
17 Charles Taber.
18 William H. Sherman's stable.
19 Hart & Akin.
20 Henry Taber's residence.
21 Engine house No. 4.
22 Thomas B. Tripp.
23 Greene & Wood Mfg. Co.
24 Cornell's stable.
25 Delano's oil works.
26 B. Dawson.
27 William Hindle.
28 Store N. W. corner Cedar and Smith.
29 Lost.
30 Edwin Dews.
31 J. B. Ashley.
32 James E. Blake.
33 Chief Engineer's office.
34 Police.
35 Store N. W. corner Arnold and Ash.
36 Jireh Swift.
37 J. L. Paddock.
38 Mrs. Joseph Reed.
39 E. Anthony & Sons.
40 Mrs. C. M. Pierce, Jr.
41 Stable, Fourth and Spring.
42 Mercury office.
43 Store cor. Grinnell and Sixth.
44 Store S. W. corner Water and South.
45 Lost.
46 Robinson's oil works.
47 N. W. cor. Acushnet avenue and Maxfield street.
48 Denison Bros. N. Mill.
49 Police.
50 "
51 Police.
52 "
53 "
54 "
55 "
56 Mrs. A. H. Howland.
57 House N. W. corner Water and Rivet.
58 Henry H. Fisher.
59 J. P. Kennedy.
60 Police.
61 Edward Hughes, cor. Acushnet and Coffin avenues.
62 Police.
63 Horace G. Howland.
64 William G. Howland.
65 New Bedford Gas Co.
66 Hastings' coal yard.
67 Chief Engineer's office.
68 L. T. Parlow.
69 Lost.
70 S. C. France.
71 Police.
72 Frederick Macy.
73 George H. Bliss.
74 Chief Engineer's office.
75 George L. Brownell.
76 James M. Tripp.
77 Potomska Mills.
78 Police.
79 "
80 "
81 "
82 Rufus A. Soule.
83 William H. Sherman.
84 Police.
85 "
86 Wamsutta Mills gate office.
87 Adoniram Negus.
88 Chief Engineer's office.
89 Wamsutta Club House.
90 Police.
91 "
92 "
93 "
94 "
95 "
96 "
97 "
98 "
99 "
100 "
101 "
102 "
103 "

104 Police.
105 "
106 "
107 "
108 "
109 "
110 "
111 "
112 "
113 "
114 "
115 "
116 "
117 "
118 "
119 "
120 D. D. Briggs.
121 Police.
122 E. C. Milliken.
123 Marcus W. Taber.
124 Rodolphus Beetle.
125 Soap factory, corner Water and Middle streets.
126 Henry T. Wood's residence.
127 Coal pockets, foot of Walnut street.
128 Snell's bakery.
129 A. H. Rhodes.
130 R. S. Lawton.
131 George A. Taylor.
132 L. G. Hewins, Jr.
133 C. S. Paisler.
134 Lost.
135 Hathaway & Soule's factory.
136 Henry Howard.
137 Mt. Washington Glass Co.
138 A. M. Pierce.
139 F. A. Sowle's Mill.
140 S. P. Richmond's bakery.
141 E. H. Martin.
142 Police.
143 George A. Cobb.
144 A. Harrington.
145 E. C. Taber.
146 Engine No. 9.
147 Hersom's soap factory.
148 Police.
149 "
150 "
151 "
152 "
153 "
154 "
155 "
156 William Lowe's residence.
157 James Wilson.
158 No. 6 engine house.
159 George W. Parker.
160 House S. W. cor. Acushnet avenue and Maxfield street.
161 D. Bromley.
162 Thomas Donaghy.
163 William A. Pease.
164 Police.
165 Henry W. Kenyon.
166 Police.
167 "
168 W. F. Wheaton.
169 T. B. Rowe.
170 Store corner Allen and Dartmouth streets.
171 George F. Luscomb.
172 Thomas Pelan.
173 William Osgood.
174 Roland Ashley.
175 John H. Lowe.
176 William J. Marr.
177 John Thompson.
178 John Lincoln.
179 L. T. Terry.
180 J. W. Lavers.
181 Chief Engineer's house.
182 Horse car stable, Purchase st.
183 A. F. Brownell.
184 James Davis' store.
185 D. A. Snell's house.
186 Abram Francis.
187 O. G. Brownell.
188 John Wing.
189 Engineer of steamer No. 6.
190 Chief Engineer's office.
191 T. M. Hart.
192 Jonathan Bourne's house.
193 House 510 Acushnet avenue.
194 Mt. Washington Glass Co.
195 Acushnet Mills.
196 Grinnell Mills.
197 " "
198 Pairpoint Mfg. Co.
199 Grinnell Mills.
200 N. B. Cordage Co.
201 Wamsutta Mills.
202 N. B. Cordage Co.
203 " "
204 " "
205 " "
206 Acushnet Mills.
207 " "
208 Wamsutta Mills.
209 " "
210 " "
211 " "

212 Grinnell Mill.
213 N. B. Mfg. Co.
214 Hathaway & Soule.
215 Potomska Mills.
216 Hathaway & Soule.
217 Potomska Mills.
218 " "
219 " "
220 N. B. Mfg. Co.
221 " "
222 " "
223 " "
224 Hathaway & Soule.
225 " "
226 M. T. D. & Machine Co.
227 " "
228 " "
229 " "
230 N. B. Copper Co.
231 " "
232 " "
233 Selmer Eggers.
234 N. B. Copper Co.
235 Delano's oil works.
236 House corner Hazard and State streets.
237 Pierce & Bushnell Mfg. Co.
238 D. D. Briggs.
239 George W. Hillman.
240 James H. Sherman.
241 Delano's oil works.
242 " "
243 " "
244 Police.
245 "
246 "
247 "
248 "
249 "
250 "
251 John Ward.
252 Louis H. Richardson.
253 N. B. Gas Co.
254 " "
255 " "
256 " "
257 " "
258 " "
259 " "
260 W. K. Wagner.
261 R. S. Taber.
262 Pairpoint Mfg. Co.
263 George B. Wheeler.
264 Mrs. Leonard.
365 F. A. Sowle.
266 C. S. Kelley.
267 Horse car stable, Purchase st.
268 Police.
269 "
270 "
271 John Lowe's store.
272 J. M. Lyons.
273 John Lowe.
274 Henry L. Dunham.
275 William F. West.
276 Benjamin H. Reed.
277 C. K. Turner.
278 Horse car stable, Purchase st.
279 N. B. & N. Y. Steamship Co.
280 Charles S. Randall.
281 Police.
282 "
283 "
284 Smith Brothers.
285 I. H. Shurtleff.
286 Gate tender's lodge, Wamsutta street.
287 C. O. Andrews.
288 Orphans Home.
289 J. P. Taylor's residence.
290 Rural cemetery.
291 George L. Brownell.
292 A. H. Covel.
293 Collamore.
294 Engineer steamer No. 2.
295 O. F. Bly.
296 L. A. Plummer's residence.
297 Dr. Knowles' residence.
298 Edward D. Mandell's residence.
299 F. S. Potter's residence.
300 Loum Snow's residence.
301 Hook & Ladder No. 2.
302 House 83 Dartmouth street.
303 John Sweeney.
304 Greene & Wood Mfg. Co.
305 John Smith.
306 William H. Washburn.
307 Horse car stable, Weld street.
308 Bowker & Tripp.
309 Walter Clifford's residence.
310 King Mfg. Co.
311 Police.
312 "
313 "
314 "
315 "
316 "
317 N. W. corner South and Water streets.
318 Smith & Carleton Iron Co.
319 Opera House office.
320 T. W. Croacher, lumber shed.

321 No. 9 Eighth street.
322 Police.
323 Janitor Opera House.
324 Engineer of steamer No. 4.
325 George Crapo.
326 S. C. Lowe's house.
327 Charles Taber.
328 J. W. Howland.
329 J. H. Platt.
330 H. A. Blackmer.
331 A. B. Kimball.
332 John O'Brien.
333 Mrs. Farley.
334 Levi W. Brawley.
335 House S. E. cor. North Front and Cedar Grove streets.
336 Captain J. Sherman.
337 W. P. Booth.
338 F. Russell.
339 Police.
340 Howland Mills.
341 " "
342 " "
343 " "
344 City Mfg. Co.
345 " "
346 " "
347 " "
348 John Duff.
349 T. M. Stetson's residence.
350 Police.
351 "
350 c. Gas Co.
351 c. Gas Co.
352 Bennett Mill.
353 " "
352 D. Police.
353 D. Police.
354 Ullman Mfg. Co.
355 " "
356 Hathaway Mills.
357 " "
358 Morgan Rotch's residence.
359 Engine No. 7.
360 Blossom Bros.' planing mill.
361 Wm. C. Taber, Jr., residence.
362 Howland Mills village.
363 " " "
364 " " "
365 Gas Co.
366 Gas Co.
367 Ullman Mfg. Co.
368 " "
369 Bennett Mills.
370 Hathaway Mills.
371 " "
372 Police.
373 "
374 "
375 "
376 "
377 "
378 S. A. Brownell.
379 L. Bartel.
380 E. C. Gardiner.
381 John A. Gomley.
382 Peter F. Sullivan.
383 William H. Rankin.
384 Engineer steamer No. 1.
385 Police.
386 "
387 "
388 "
389 "
390 "
391 "
392 "
393 "
394 "
395 "
396 "
397 Clark Underwood.
398 Edison light station.
399 A. G. Howland.
400 J. J. Howland.
401 Alfred R. Bucklin.
402 Engineer steamer No. 7.
403 Department lineman.
404 E. E. Enos.
405 Smith & Carleton Iron Co.
406 " " "
407 Bunker's drug store.
408 E. E. Enos' drug store.
409 Charles H. Brownell.
410 E. W. Hervey's residence.
411 S. A. Brownell's residence.
412 Smith & Carleton Iron Co.
413 " " "
414 Police.
415 Henry Ashley, residence.
416 Luscomb & Cory's machine shop.
417 Wade's currier shop.
418 James Burke, residence.
419 Bliss & Nye, store.
420 D. B. Folger, store.
421 Harrington school.
422 Rhodes' eyelet factory.
423 " " "
424 Handy's iron store.
425 Old Colony freight.
426 " "

427 Old Colony Steamship Co.
428 " "
429 Allen Tinkham.
430 Old Colony freight.
431 " "
432 " Steamship Co.
433 " "
434 Capt. T. D. Howland.
435 Henry Smith.
436 Rotch Mills.
437 "
438 Pierce Mills.
439 "
440 Bristol Mills.
441 "
442 Jason Ballou.
443 Samuel Watson.
444 Columbia Mills.
445 "
446 Janitor Swain school.
447 William Taylor.
448 A. A. Wood.
449 Watchman at Charles Taber's.
450 House S. W. corner Water and Middle streets.
451 J. H. D. Brown's residence.
452 William Taylor's residence.
453 B. Groves, 146 Union street.
454 House 319 Belleville avenue.
455 Store N. W. cor. Belleville av. and Coggeshall street.
456 Fortin Block, N. E. corner.
457 Randall's lumber yard.
458 Paper Mill, Hastings' wharf.
459 A. D. Duval's store, Acushnet avenue.
460 Pope House, Acushnet avenue.
461 Marshall Greene, residence.
462 Martin Fitchtenmeyer, residence.
463 Store cor. Bonney and Rockland streets.
464 Rotch Mills.
465 Samuel France, residence.
466 Rotch Mills.
467 Pierce Mills.
468 "
469 Clarence Cook, residence.
470 Bristol Mills.
471 "
472 Wilson & Knapp Casket Co.
473 Columbia Mills.
474 " "
475 Patnaude's store.
476 E. Ryan, residence.
477 Covill, druggist.
478 Peter Sullivan, residence.
479 N. E. cor. Sawyer and Acushnet avenue.
480 Orville Cranston.
481 Police.
482 "
483 "
484 "
485 "
486 "
487 "
488 "
489 "
490 "
491 Corner Chestnut and Parker streets.
492 I. B. Tompkins, residence.
493 Henry Richmond, residence.
494 William McCann.
495 Cleveland's bakery.
496 Office.
497 Hedge & Lewis, button factory.
498 L. W. Hayes, stave mill.
499 Ordway Chair Co.
500 Police.
504 "
505 James H. Bamford.
506 J. F. Hoye, 44 North Water st.
507 J. J. Donaghy.

Location of Reservoirs.

Durfee street, southeast corner of Shawmut avenue.
Linden street, northeast corner of Ashland.
Franklin street, southwest corner of State.
Willis street, northeast corner of State.
Campbell street, west side of Purchase.
Smith street, southeast corner of Cypress.
Pleasant street, between Maxfield and Sycamore.
County street, southeast corner of Maxfield.
Pleasant street, southwest corner of North.
Chestnut street, between Mill and North.
Mill street, southwest corner of Purchase.
Kempton street, between Cypress and Cedar.
High street, near northeast corner of Foster.
Middle street, near southeast corner of Purchase.
Middle street, west of grammar school.
County street, front of M. E. church.
North Second street, northwest corner of William.
City Hall square, west of hall.
Court street, near head of Orchard.
Union street, southwest corner of County.
Union street, southeast corner of Fourth.
School street, northwest corner of Fourth.
South Second street, northwest corner of Walnut.
South Sixth street, northwest corner of Walnut.
Orchard street, east side, below Hawthorn.
Russell street, between County and South Sixth.
Acushnet avenue, southeast corner of Cannon.
Bedford street, southeast corner of Fifth.
South Sixth street, southwest corner of Wing.
Acushnet avenue, southeast corner of Grinnell.
Washington street, northeast corner of Crapo.

TABLE M.

Location of Hydrants.

	Pressure in lbs.
Acushnet avenue, west side, 542 feet north of Tarkiln Hill road. Post.	54
Acushnet avenue, southwest corner of Tarkiln Hill road. Post.	55
Acushnet avenue, west side, south of Tarkiln Hill road 500 feet. Post.	54
Acushnet avenue, west side, south of Tarkiln Hill road 997 feet. Post.	53
Acushnet avenue, west side, north of North Belleville road 600 feet. Post.	53
Acushnet avenue, west side, north of North Belleville road 6 feet. Post.	54
Acushnet avenue, west side, south of North Belleville road 601 feet. Post.	55
Acushnet avenue, west side, north of Shaw 610 feet. Post.	51
Acushnet avenue, northwest corner of Shaw. Post.	47
Acushnet avenue, west side, north of South Belleville road 603½ feet. Post.	45
Acushnet avenue, west side, head of South Belleville road. Post.	42
Acushnet avenue, northwest corner of Nash road. Post.	40
Acushnet avenue, northwest corner of Hathaway avenue. Post.	40
Acushnet avenue, northwest corner of Davis. Post.	41
Acushnet avenue, southwest corner of Phillips avenue. Post.	39
Acushnet avenue, southwest corner of Dean. Post.	48
Acushnet avenue, west side, north of Sawyer 574½ feet. Post.	53
Acushnet avenue, southwest corner of Coggeshall. Post.	56
Acushnet avenue, southwest corner of Cedar Grove. Post.	54
Acushnet avenue, west side, south of Logan 335 feet. Post.	60
Acushnet avenue, west side, north of Wamsutta 514 feet. Double.	62
Acushnet avenue, west side, north of Wamsutta 372 feet. Post.	60
Acushnet avenue, west side, south of Wamsutta 255 feet.	63
Acushnet avenue, west side, at end of Wall street. Post.	62
Acushnet avenue, southeast corner of Pope.	64
Acushnet avenue, northwest corner of Willis.	61
Acushnet avenue, west side, south of Campbell 179 feet.	59
Acushnet avenue, northwest corner of Maxfield.	57

Acushnet avenue, northwest corner of Kempton. 47
Acushnet avenue, northeast corner of Elm. 47
Acushnet avenue, northwest corner of School. Post. 51
Acushnet avenue, northwest corner of Madison. Post. 57
Acushnet avenue, northwest corner of Russell. Post. 58
Acushnet avenue, northwest corner of Bedford. Post. 60
Acushnet avenue, west side, opposite Howland. 61
Acushnet avenue, northwest corner of Potomska. Post. 50
Acushnet avenue, west side, north of Rivet 98 feet. Post. 59
Acushnet avenue, southwest corner of Blackmer. 60
Allen street, southeast corner of Bonney. 46
Allen street, northwest corner of Ward. 41
Allen street, north side, east of Page 159 feet. 38
Allen street, southwest corner of Page. Post. 36
Arch street, southwest corner of Union. 24
Armour street, southwest corner of Union. Post. 24
Arnold street, south side, west of Orchard 96 feet. Post. 22
Arnold street, southwest corner of Chancery. 33
Arnold street, southeast corner of Atlantic. 32
Arnold street, south side, 15.3 feet west of James. Post. 24
Ash street, northwest corner of Middle. Post. 27
Ash street, southwest corner of Morgan. Double. 25
Ash street, northwest corner of Arnold. 32
Ash street, northwest corner of Maple. 34
Ash street, northwest corner of Bedford. Post. 37
Ashland street, west side, head of Linden. 11
Ashland street, southwest corner of Clark. Post. 12
Atlantic street, west side, 186 feet south of Arnold. Post. 29
Atlantic street, southwest corner of Union. Post. 31
Austin street, southeast corner of State. Post. 42
Austin street, southwest corner of Purchase. Post. 56
Austin street, southeast corner of Cedar. Post. 19
Austin street, south side, on west line of Wilson. Post. 20
Austin street, southwest corner of Ashland. Post. 15
Austin street, southeast corner of Shawmut avenue. Post. 14
Babbitt street, south side, 207.5 feet west of Dartmouth. Post. . . . 42
Babbitt street, southeast corner of Field. Post. 37
Bay street, south side, 49 feet east of Columbia. Post. 43

Bedford street, southwest corner of Fifth. Post. 55
Bedford street, southeast corner of County. 47
Bedford street, southeast corner of Orchard. 37
Beech street, northwest corner of Kempton. Post. 18
Beetle street, southwest corner of Howard. Post. 55
Beetle street, southeast corner of Front. Post. 57
Belleville avenue, west side, 118 feet north of Washburn. Post. . . 63
Belleville avenue, northwest corner of Cedar Grove. Post. 62
Belleville avenue, southwest corner of Washburn. Post. 61
Belleville avenue, west side, 134 feet north of Coggeshall. Post. . . 62
Belleville avenue, northwest corner of Beetle. Post. 60
Belleville avenue, southwest corner of Coffin avenue. Post. 59
Belleville avenue, west side, 141 feet north of Phillips avenue. Post. 59
Blackmer street, south side, east of Front 575 feet. Post. 63
Bolton road, west side, 246 feet north of Rivet. Post. 50
Bolton road, west side, north of Rotch Mill No. 2. Post. 49
Bolton road, west side, south of Rotch Mill No. 2. Post. 49
Bolton road, west side, south of Rivet 1,027 feet. Post. 59
Bolton road, northwest corner Poplar road. Post. 59
Bonney street, northwest corner of Grinnell. 51
Bonney street, northwest corner of Rockland. Post. 54
Bonney street, west side, 259 feet north of Rivet. Post. 61
Borden street, southwest corner of Bay. Post. 42
Bourne street, west side, 144 feet north of Fruit. Post. 44
Bowditch street, southwest corner of Weld. Post. 56
Bowditch street, west side, 313 feet south of Cedar Grove. Post. . . 55
Bowditch street, west side, north of Cedar Grove 244 feet. Post. . . 55
Bowditch street, west side, 406 feet south of Sawyer. Post. 52
Bridge avenue, north side, 44 feet west of draw. 62
Bridge avenue, south side, 11 feet west of draw. 62
Brownell street, west side, 294 feet south of Union. Post. 22
Bullock street, southwest corner of Trinity. Post. 14
Campbell street, south side, east of County 163 feet. 28
Campbell street, south side, 216.5 feet west of County. Post. . . . 25
Campbell street, southwest corner of Cottage. Post. 19
Campbell street, south side, east of Emerson 205 feet. 18
Campbell street, southwest corner of Purchase. Post. 49
Cannon street, south side, east of Second 164 feet. Post. 63

Cedar street, northwest corner of Elm. Double. 25
Cedar street, southwest corner of Kempton. 26
Cedar street, west side, north of Mill 75 feet. 23
Cedar street, southwest corner of Hillman. 23
Cedar street, northwest corner of Sycamore. 21
Cedar street, southwest corner of Campbell. . . . . .
Cedar street, southwest corner of Parker. 19
Cedar Grove street, southeast corner of Front. Post. 60
Cedar Grove street, southeast corner of Howard. Post. 58
Cedar Grove street, south side, 383 feet west of Bowditch. Post. . . 57
Cedar Grove street, northwest corner of Purchase. Post. 56
Cedar Grove street, southwest corner of County. Post. 43
Cedar Grove street, south side, 183.5 feet west of County. Post. . . 40
Centre street, south side, east of Water 85 feet. 56
Chancery street, west side, 167 feet south of Clinton. Post. 34
Chancery street, west side, north of Arnold 406 feet. Post. 33
Chancery street, southwest corner of Elm. Post. 28
Chancery street, west side, south of Parker 176 feet. Post. 24
Chancery street, west side, 263 feet north of Parker. Post. 16
Cherry street, southeast corner of Seventh. 38
Chestnut street, southwest corner of North. 19
Chestnut street, west side, north of Campbell 96 feet. 22
Clark street, southwest corner of State. 47
Clark street, south side, 170 feet west of County. Post. 40
Clay street, northwest corner of Columbia. Post. 44
Clinton street, south side, east of Orchard 125 feet. 26
Clinton street, south side, west of Ash 242.5 feet. Post. 44
Coffin avenue, southwest corner of North Purchase. Post. 40
Coffin avenue, south side, opposite Oneko lane. Post. 40
Coffin avenue, southeast corner of Bowditch. Post. 40
Coffin avenue, southeast corner of Front. Post. 50
Coffin avenue, south side, 1,337 feet east of Belleville avenue. Post. 63
Coffin street, north side, 262 feet east of Water. Post. 62
Coggeshall street, south side, 654 feet east of Mitchell. Post. . . . 63
Coggeshall street, south side, 498 feet east of Mitchell. Post. . . . 62
Coggeshall street, south side, 334 feet east of Mitchell. Post. . . . 62
Coggeshall street, north side, 148 feet east of Mitchell. Post. . . . 62
Coggeshall street, southeast corner of Belleville avenue. Post. . . . 62

Coggeshall street, southwest corner of Front. Post. 61
Coggeshall street, southwest corner of Purchase. Post. 53
Coggeshall street, southeast corner of County. Post. 43
Coggeshall street, south side, 384 feet west of County. Post. . . . 36
Collins street, southeast corner of Glover. Post. 15
Columbia street, southwest corner of Allen. Post. 40
Commercial street, north side, east of Front 82 feet. Post. 62
Cottage road, south side, 435 feet west of Bolton road. Post. . . . 55
Cottage street, southwest corner of Bay. Post. 43
Cottage street, northwest corner of Allen. 42
Cottage street, northwest corner of Bedford. 37
Cottage street, northwest corner of Hawthorn. 31
Cottage street, southwest corner of Arnold. 23
Cottage street, southwest corner of Union. 22
Cottage street, southwest corner of Kempton. Post. 22
Cottage street, northwest corner of Hillman. Post. 20
Cottage street, northwest corner of Sycamore. Post. 20
Cottage street, northwest corner of Parker. Post. 23
Cottage street, west side, 237 feet north of Locust. Post. 20
Cottage street, west side, 92 feet south of Austin. Post. 17
County street, west side, 200 feet north of Coggeshall. Post. . . . 44
County street, southeast corner of Penniman. Post. 44
County street, west side, 234½ feet south of Clark. Post. 43
County street, west side, 115 feet south of Weld. Post. 42
County street, southwest corner of Austin. Post. 33
County street, northwest corner of Locust. Post. 24
County street, northwest corner of Parker. 23
County street, southwest corner of Smith. Post. 30
County street, southwest corner of Maxfield. 25
County street, southwest corner of North. 21
County street, southwest corner of Middle. Double. 22
County street, southwest corner of Morgan. Post. 22
County street, northwest corner of Union. 24
County street, west side, head of School. 27
County street, northwest corner of Madison. 32
County street, southwest corner of Hawthorn 36
County street, northwest corner of Allen. 49
County street, southwest corner of Grinnell. Post. 61

County street, northwest corner of South. Post. 62
County street, northwest corner of Winsor. Post. 57
County street, west side, 71 feet north of Division. Post. 54
County street, northwest corner of Cove road. Post. 62
Court street, southwest corner of Orchard. 22
Court street, south side, opposite Cedar. 23
Court street, northeast corner of Ash. Post. 20
Court street, south side, opposite Emerson. 26
Court street, south side, west from Park 304 feet. 32
Court street, south side, head of Jenney. Post. 23
Court street, south side, east of Reed 300 feet. Post. 22
Cove road, southwest corner of Shore street. Post. 61
Cove road, south side, 365 feet west of County. Post. 61
Cove street, southwest corner of Cleveland avenue. Post. 61
Cove street, southwest corner of Harrison avenue. Post 61
Cove street, southwest corner of Salisbury. Post. 59
Cove street, southwest corner of Viall. Post. 59
Cove street, southwest corner of McGurk. Post. 59
Cove street, south side, west of Water 334½ feet. Post. 60
Cove street, southeast corner of County. Post. 72
Crapo street, west side, south of Washington 343 feet. 60
Crapo street, west side, south of Rockland 225 feet. 63
Crapo street, west side, 160 feet south of Thompson. Post 58
Dartmouth street, east side, southwest of Orchard 110 feet. 47
Dartmouth street, east side, 125 feet south of Hickory. Post. . . . 47
Dartmouth street, east side, 260 feet south of Rockland. Post. . . 45
Dartmouth street, east side, 99 feet south of Thompson. Post . . . 44
Dartmouth street, southeast corner of Larch. Post. 42
Dartmouth street, east side, 28 feet north of Dunbar. Post. 43
Dean street, southwest corner of Belleville avenue. Post. 62
Dean street, southeast corner of Front. Post. 50
Delano street, southwest corner of Water. Post. 57
Delano street, southeast corner of Acushnet avenue. Post. 57
Division street, southeast corner of Second. Post. 61
Division street, south side, 527 feet west of County. Post. 62
Division street, south side, east of Crapo 6 feet. Post. 58
Durfee street, southwest corner of Cedar. Post. 15
Durfee street, southwest corner of Bullock. Post. 17

Durfee street, southwest corner of Shawmut avenue. Post. 12
East French avenue, northwest corner of Columbia avenue. Post. . 61
Elm street, southwest corner of Purchase. Post. 43
Elm street, southwest corner of Pleasant. 38
Elm street, southwest corner of Summer. 18
Elm street, south side, 43.5 feet west of Florence. Post. 26
Elm street, southeast corner of Palmer. Post. 14
Emerson street, west side, 173.8 feet north of Arnold. Post. 29
Field street, west side, 351 feet south of Babbitt. Post. 37
Fifth street, southwest corner of Union. Post. 41
Fifth street, southwest corner of School. Post. 45
Fifth street, west side, south of Madison 245 feet. 50
Fifth street, northwest corner of Wing. Post. 59
Fifth street, northwest corner of Grinnell. 61
First street, southwest corner of Spring. 58
First street, west side, south of School 109 feet. 57
First street, west side, south of Howland 185 feet. 65
First street, west side, south of South 255 feet. 63
Florence street, west side, north of North 180 feet. Post. 26
Florence street, northwest corner of Mill. Post. 24
Florence street, west side, 199.6 feet south of Kempton. Post. . . . 27
Florence street, southwest corner of Morgan. Post. 29
Forest street, south side, west of County 90 feet. 53
Foster street, southwest corner of Maxfield 37
Foster street, northwest corner of High. 33
Fourth street, southwest corner of Union. 46
Fourth street, west side, north of School 106 feet. 46
Fourth street, west side, south of Madison 210 feet. 54
Fourth street, east side, opposite Washington. Post. 57
Fourth street, northwest corner of Rockland. 62
Fourth street, west side, south of Potomska 61 feet. Post. 58
Franklin street, southwest corner of Pleasant. 43
Franklin street, southwest corner of State. Post. 38
French avenue, west side, south of Cove road 14 feet. 60
Front street, southwest corner of Holly. Post. 56
Front street, west side, south of Washburn 319 feet. 62
Front street, west side, south of Logan 383 feet. Post. 63
Front street, southeast corner of Wamsutta. Post. 65

Front street, southwest corner of Hazards lane. 61
Front street, northwest corner of Rodman. Post. 61
Front street, southwest corner of Centre. 61
Front street, west side, south of Commercial 86 feet. 63
Front street, northwest corner of lane head of Merrill's wharf. . . . 65
Front street, west side, south of Howland 268 feet. Post. 61
Front street, southwest corner of Grinnell. Post. 62
Front street, west side, south of South 330 feet. Post. 62
Front street, west side, 191 feet north of Blackmer. Post. 59
Front street, west side, north of Delano 191 feet. Post. 62
Fruit street, south side, east of Hemlock 126.5 feet. Post. 53
Fruit street, south side, 25.5 feet west of Mulberry. Post. 46
Gifford street, south side, 274 feet east of Water. Post. 65
Grand street, south side, 750 feet west of Shawmut avenue. Post. . 14
Granfield street, west side, 263 feet north of Coggeshall. Post. . . 59
Grape street, south side, west of Lewis 131 feet. Post. 36
Grape street, southwest corner of Small. Post. 35
Grape street, southwest corner of Devoll. Post. 29
Griffin street, southwest corner of Second. 62
Grinnell street, south side, west of Acushnet avenue 76 feet. 60
Grinnell street, south side, east of Crapo 103 feet. 58
Grinnell street, southwest corner of Orchard. Post. 50
Grove street, southwest corner of Anthony. 32
Harbor street, east side, 195 feet north of Cove. Post. 60
Harbor street, east side, 372 feet north of Cove. Post. 60
Harbor street, east side, 540 feet north of Cove. Post. 60
Harbor street, southeast corner of Gifford. Post. 61
Harmony street, southwest corner of Social. Post. 59
Harrison street, southwest corner of Hickory. Post. 48
Hawthorn street, southeast corner of Page. 28
Hawthorn street, south side, east of Tremont 147 feet. Post. . . . 28
Hawthorn street, southwest corner of Brigham. Post. 26
Hawthorn street, south side, 301 feet west of Brigham. Post. . . . 24
Hazard street, south side, west of State 140 feet. 36
Hazard street, southwest corner of Pleasant. 46
Hemlock street, west side, 231 feet south of Rockland. Post. . . . 50
Hicks street, south side, east of Acushnet avenue 276 feet. Post. . 56
High street, south side, east of Acushnet avenue 43 feet. 48

High street, southwest corner of Purchase. Post. 42
High street, south side, east of County 177 feet. 23
Hillman street, southwest corner of Second. 57
Hillman street, southwest corner of Purchase. Post. 45
Hillman street, southeast corner of Hill. 32
Hillman street, southwest corner of Chancery. Post. 29
Holly street, southwest corner of Belleville avenue. Post. 61
Howland street, northeast corner of Second. 63
Howland street, south side, 19.2 feet west of Prospect. Post. . . . 60
Independence street, south side, 480 feet west of County. Post. . . 57
Irving court, north end of court. 25
James street, west side, 107 feet north of Arnold. Post. 24
James street, southwest corner of Court. Post. 24
Katharine street, south side, 66.7 feet east of Crapo. Post. 62
Kempton street, southwest corner of Pleasant. Post. 36
Kempton street, south side, opposite Hill. 28
Kempton street, southwest corner of Summer. 19
Kempton street, southwest corner of Emerson. 26
Kempton street, southwest corner of Park. 28
Kempton street, southwest corner of Liberty. 29
Kempton street, southeast corner of Jenney. 26
Kempton street, south side, west of Hunter 50 feet. Post. 21
Kempton street, southwest corner of Francis. Post. 14
Kilburn street, north side, east of Front 244 feet. Post. 62
Kilburn street, north side, east of Front 581 feet. Post. 64
Larch street, south side, 120 feet east of Mulberry. Post. 45
Larch street, south side, 129 feet east of Hemlock. Post. 51
Liberty street, west side, south of Kempton 339 feet. 30
Lincoln street, west side, south of Union 171 feet. 23
Linden street, south side, west of State 13½ feet. Post. 43
Linden street, south side, west of County 169 feet. Post. 34
Linden street, south side, 67½ feet west of Reynolds. Post. 24
Linden street, south side, 6½ feet east of Ashland. Post. 14
Lindsey street, west side, 173 feet south of Kempton. Post. 27
Lindsey street, northwest corner of Morgan. Post. 24
Locust street, southwest corner of Chestnut. Post. 23
Locust street, southeast corner of Richmond. Post. 15
Logan street, southwest corner of North Front. 65

Logan street, south side, east of Acushnet avenue 400 feet. 62
Logan street, southwest corner of Acushnet avenue. 63
Lombard street, west side, 209½ feet south of Rockland. Post. . . 50
Madison street, southwest corner of First. 61
Madison street, southwest corner of Sixth. Post. 41
Maitland street, southwest corner of Cedar. Post. 19
Maitland street, south side, 101 feet west of Richmond. Post. . . . 16
Maxfield street, southwest corner of Second. Post. 58
Maxfield street, southwest corner of Purchase. Post. 46
Maxfield street, southwest corner of Pleasant. Post. 38
Maxfield street, southeast corner of Chestnut. 19
Maxfield street, southeast corner of Spruce. 21
Maxfield street, southwest corner of Ash. Post. 22
Maxfield street, south side, 93 feet east of Chancery. Post. 26
McGurk street, west side, 348 feet north of Middle Point road. Post. 55
Mechanics lane, northwest corner of Purchase. Post. 42
Mechanics lane, north side, east of Eighth 206 feet. 30
Merrimac street, southwest corner of State. Post. 41
Middle street, southeast corner of Second. 54
Middle street, southwest corner of Purchase. Post. 42
Middle street, southeast corner of Sixth. Double. 36
Middle street, south side, east of Cedar 371 feet. 32
Middle street, southeast corner of Chancery. 29
Mill street, northwest corner of Purchase. Post. 43
Mill street, south side, west of Hill 191 feet. 25
Mill street, south side, west of Ash 45 feet. 25
Mill street, southeast corner of Newton. Post. 26
Mill street, south side, 138 feet west of Hunter. Post. 18
Mill street, south side, 97.9 feet west of Beech. Post. 14
Mitchell street, northwest corner of Coggeshall. Post. 61
Mitchell street, west side, 178.8 feet north of Coggeshall. Post. . . 63
Mitchell street, west side, 345 feet south of Sawyer. Post. 61
Mitchell street, southwest corner of Sawyer. Post. 61
Morgan street, southwest corner of Cottage. 33
Mortons court, west side, 258 feet north of Cove. Post. 57
Mosher street, south side, west of County 517 feet. Post. 59
Mt. Pleasant street, southeast corner of distributing reservoir. . . . 4
Mt. Pleasant street, west side, north of Durfee 572 feet. 8

Mt. Pleasant street, northwest corner of Durfee. Post. 12
Mt. Vernon street, south side, 359 feet west of Mt. Pleasant. 6
Myrtle street, west side, 22 feet south of Weld. Post. 23
Myrtle street, west side, 35 feet south of Clark. Post. 23
Nelson street, south side, 541.6 feet west of County. Post. 60
Newton street, northwest corner of Elm. Post. 29
North street, southeast corner of Second. Post. 54
North street, southeast corner of Acushnet avenue. 50
North street, southwest corner of Purchase. Post. 44
North street, northwest corner of Pleasant. Post. 35
North street, southwest corner of Foster. 35
North street, southwest corner of Park. Post. 29
North street, southeast corner of Newton. Post. 32
North street, southwest corner of Hunter. Post. 22
Nye street, southwest corner of Belleville avenue. Post. 60
Nye street, southwest corner of Front. Post. 54
Oak street, southwest corner of Harrison. Post. 45
Oak street, northwest corner of Grape. Post. 41
Oak street, southwest corner of Allen. Post. 38
Ocean street, west side, 184½ feet south of Arnold. Post. 32
Old Point road, west side, east of French avenue 650 feet. 53
Old Point road, west side, 2,510 feet east of McGurk. 43
Orchard street, west side, head of Madison. 27
Page street, west side, 429½ feet south of Hawthorn. Post. 36
Palmer street, west side, 113 feet south of Court. Post. 19
Park place, south side, west of Sixth 306 feet. 32
Park street, west side, 27.1 feet south of Maxfield. Post. 24
Park street, southwest corner of Hillman. Post. 25
Park street, west side, south of Kempton 339 feet. Post. 27
Park street, northwest corner of Court. Post. 28
Park street, west side, north of Arnold 263 feet. Post. 34
Parker street, south side, at Oak Grove Cemetery. Post. 25
Parker street, southwest corner of Summer. 27
Pearl street, southwest corner of Pleasant. Post. 41
Pearl street, southwest corner of Purchase. Post. 50
Pine street, northwest corner of Cross. 65
Pleasant street, southwest corner of Market. 37
Pleasant street, west side, north of William 21½ feet. Post. 40

Pleasant street, east side, foot of Sycamore. Post. 39
Pleasant street, northwest corner of Pope. 42
Pleasant street, northwest corner of Austin. 47
Pleasant street, southwest corner of Linden. 48
Pleasant street, southwest corner of Weld. Post. 48
Pope street, south side, opposite North Oak. 32
Pope street, south side, 226 feet east of Chestnut. Post. 21
Poplar road, south side, 431 feet west of Bolton road. Post. 52
Potomska street, a group of three post hydrants located about 300 feet east of Prospect and 91 feet north of south line of Potomska street. 64
Prospect street, west side, 275.2 feet north of Grinnell. Post. . . . 61
Prospect street, northwest corner of Grinnell. Post. 63
Prospect street, west side, north of Potomska 324½ feet. Post. . . 62
Prospect street, northwest corner of Potomska. Post. 63
Purchase street, northwest corner of Dean. Post. 43
Purchase street, west side, opposite Oneko Mill. Post. 48
Purchase street, east side, opposite Clark. Post. 58
Purchase street, west side, opposite Logan. 58
Purchase street, northwest corner of Merrimac. Double. 51
Purchase street, northwest corner of Pope. 52
Purchase street, west side, 348 feet south of Campbell. Post. . . . 48
Purchase street, northwest corner of Union. 43
Reed street, west side, 145 feet north of Court. Post. 19
Reed street, west side, 25 feet north of Elm. Post. 15
Reed street, west side, 293 feet south of Kempton. Post. 18
Reynolds street, southwest corner of Weld. Post. 26
Reynolds street, west side, 17.9 feet south of Clark. Post. 29
River street, southwest corner of Belleville avenue. Post. 60
River street, southeast corner of Front. Post. 53
Riverside avenue, west side, 155 feet north of Coffin avenue. Post. . 63
Rivet street, southwest corner of Second. 62
Rivet street, southwest corner of County. Post. 59
Rivet street, southwest corner of Bonney. Post. 59
Rivet street, southwest corner of Hemlock. Post. 51
Rivet street, southeast corner of Bolton road. Post. 56
Robeson street, southwest corner of County. Post. 26
Robeson street, southeast corner of Cottage. Post. 19
Robeson street, southwest corner of Ashland. Post. 15

Robeson street, southeast corner of Cedar. Post. 21
Robeson street, south side, 424 feet west of Cedar. Post. 17
Rockdale avenue, southwest corner of Bolton road. Post. 57
Rockdale avenue, south side, 327 feet west of Bolton road. Post. . . 54
Rockland street, southwest corner of County. Post. 58
Rockland street, southeast corner of Hall. Post. 56
Rockland street, south side, 13 feet west of Orchard. Post. 54
Rockland street, southwest corner of Lombard. Post. 50
Rounds street, northwest corner of Elm. Post. 22
Rural street, southwest corner of Allen. Post. 28
Russell street, south side, east of Fifth 92 feet. 54
Russell street, southwest corner of Sixth. Post. 47
Russell street, south side, 179 feet west of Sixth. Post. 42
Salisbury street, west side, 598 feet south of Cove. Post. 53
Sawyer street, southwest corner of Bowditch. Post. 53
Sawyer street, southwest corner of Acushnet avenue. Post. 59
Sawyer street, southeast corner of Belleville avenue. Post. 65
Sawyer street, north side, 750 feet east of Belleville avenue. Post. . 63
Sawyer street, south side, 418.8 feet east of Mitchell. Post. 64
School street, southwest corner of Sixth. Post. 37
Scott street, south side, 325 feet west of County. Post. 59
Second street, northwest corner of Mill. 55
Second street, west side, south of Elm 52 feet. Post. 52
Second street, west side, south of Spring 74 feet. 55
Second street, northwest corner of Coffin. 61
Second street, west side, at head of Morgans lane. Post. 60
Second street, west side, north of Grinnell 61 feet. 63
Second street, west side, north of Potomska 232 feet. Post. 61
Second street, west side, south of Potomska 122 feet. Post. 63
Second street, west side, 188 feet south of Blackmer. Post. 59
Seventh street, southwest corner of Union. Post. 31
Seventh street, west side, north of Madison 50 feet. 36
Shawmut avenue, southwest corner of Willis. Post. 18
Shawmut avenue, southwest corner of Parker. Post. 18
Shawmut avenue, west side, head of Locust. Post. 17
Shawmut avenue, west side, 32 feet north of Maitland. Post. . . . 14
Shawmut avenue, west side, north of Austin. Post. 13
Shawmut avenue, west side, 497 feet north of Durfee. Post. 12

Shawmut avenue, west side, 127 feet north of Durfee. Post. 12
Shawmut avenue, southwest corner of Grand. Post. 11
Shawmut avenue, west side, 203 feet north of Grand. Post. 11
Sherman street, south side, west of County 314 feet. 51
Shore street, west side, 264 feet south of Cove road. Post. 61
Short street, west side, 321 feet south of Allen. Post. 34
Sisson street, northwest corner of Union. Post. 25
Sixth street, west side, north of Grinnell 194 feet. Post. 60
Smith street, southwest corner of Chestnut. Double. 22
Smith street, southeast corner of Spruce. Double. 20
Smith street, southeast corner of Shawmut avenue. 22
Smith street, south side, east of Park 5 feet. Post. 29
South street, southwest corner of Acushnet avenue. 62
South street, southwest corner of Second. 62
South street, southwest corner of Water. Post. 63
South street, southwest corner of Prospect. Post. 61
Spring street, southeast corner of Acushnet avenue. Post. 51
Spring street, southwest corner of Seventh. 32
Spring street, southeast corner of Fifth. 42
Spruce street, west side, 347 feet north of Parker. Post. 21
State street, northwest corner of Sycamore. 35
State street, southwest corner of Pearl. 34
Summer street, northwest corner of North. 16
Summer street, northwest corner of Hillman. 16
Summer street, southwest corner of Willis. 26
Sycamore street, southwest corner of Thomas. 30
Sycamore street, southwest corner of Summer. 24
Sycamore street, south side, west of Ash 68 feet. 22
Tallman street, southwest corner of Belleville avenue. Post. . . . 61
Thomas street, northwest corner of Hillman. 24
Thompson street, south side, 20 feet east of Hall. Post. 58
Thompson street, south side, 302 feet west of Bonney. Post. . . . 55
Thompson street, southwest corner of County. Post. 59
Tremont street, southwest corner of Union. Post. 26
Tremont street, northwest corner of Maple. Post. 29
Trinity street, south side, 145 feet west of Cedar. Post. 19
Union street, southwest corner of Front. Post. 63
Union street, southwest corner of Water. Post. 57

Union street, southwest corner of First. Post. 56
Union street, southwest corner of Second. Post. 52
Union street, southwest corner of Acushnet avenue. Post. 48
Union street, southwest corner of Sixth. Post. 38
Union street, southeast corner of Emerson. Post. 28
Union street, south side, 344 feet west of Park. Post. 28
Viall street, west side, 188 feet south of Cove. Post. 59
Walden street, southwest corner of Maxfield. 31
Wall street, south side, east of Acushnet avenue 165 feet. 62
Walnut street, northwest corner of Front. Post. 61
Walnut street, southwest corner of Second. 57
Walnut street, southeast corner of Fourth. Double. 51
Walnut street, southwest corner of Seventh. Post. 38
Wamsutta street, south side, west of Front 200 feet. Post. 65
Wamsutta street, south side, west of Front 372 feet. Post. 65
Wamsutta street, south side, east of Acushnet av., 285 feet. Double. 64
Ward street, southwest corner of Bay. Post. 44
Washburn street, southeast corner of Acushnet avenue. Post. . . . 59
Washburn street, south side, west of North Front 228 feet. Post. . . 59
Washington street, southeast corner of Crapo. 58
Washington street, south side, west of Orchard 102 feet. 50
Washington street, southeast corner of Dartmouth. 46
Water street, southwest corner of Hillman. 65
Water street, southwest corner of North. Post. 64
Water street, west side, south of North 258 feet. 63
Water street, northwest corner of Middle. Double. 62
Water street, southwest corner of Elm. 60
Water street, west side, north of Centre, 46 feet. 50
Water street, west side, north of School 22 feet. 60
Water street, northwest corner of Walnut. 61
Water street, northwest corner of City wharf. 62
Water street, northwest corner of Coffin. 64
Water street, west side, head of Pine. Post. 67
Water street, west side, head of Leonard. Post. 62
Water street, southwest corner of Howland. Post. 60
Water street, northwest corner of Grinnell. Post. 60
Water street, northwest corner of Potomska. Post. 63
Water street, west side, 266 feet south of Potomska. Post. 63

Water street, northwest corner of Rivet. Post. 63
Water street, southwest corner of Blackmer. Post. 63
Water street, northwest corner of Delano. Post. 62
Water street, west side, head of Gifford. Post. 62
Water street, northwest corner of Cove. Post. 62
Weld street, southwest corner of State. Post. 43
William street, southwest corner of Bethel. Post. 51
William street, southwest corner of Second. Post. 48
William street, southeast corner of Acushnet avenue. Post. 47
William street, southwest corner of Purchase. Post. 43
William street, southwest corner of Sixth. Post. 38
William street, southwest corner of Eighth. 26
Willis street, southwest corner of Purchase. Post. 50
Willis street, southeast corner of Pleasant. Post. 41
Willis street, southwest corner of State. 32
Willis street, southwest corner of County. Post. 26
Willis street, southwest corner of Cottage. Post. 19
Willis street, south side, west of Cedar 200 feet. 18
Willow street, south side, 305.1 feet east of Cedar. Post. 16
Willow street, southeast corner of Shawmut avenue. Post. 13
Wing street, southwest corner of Fourth. 57
Wing street, southwest corner of Sixth. Post. 57
Winsor street, south side, west of County 455½ feet. Post. 58
Winsor street, south side, 77½ feet east of Crapo. Post. 60

Number of flush hydrants, ... 183
Number of post hydrants, ... 402

Total number of hydrants, ... 585

In Board of Aldermen,
March 8, 1894.

Received, and ordered printed in the City Documents, and sent down for concurrence.

D. B. LEONARD,
City Clerk.

In Common Council,
3 mo. 8, 1894.

Concurred.

WILLIAM A. MACKIE,
Clerk.

1893—CITY DOCUMENT NO. 6.

ANNUAL REPORT

OF THE

SCHOOL COMMITTEE

OF THE

CITY OF NEW BEDFORD,

TOGETHER WITH THE

Superintendent's Annual Report

FOR THE YEAR 1893.

NEW BEDFORD:
EVENING JOURNAL COMPANY, PRINTERS TO THE CITY.
1894.

In School Committee,

Jan. 2, 1894.

Voted, That the Secretary prepare the Annual Report of the School Board for the year 1893, and that 1,500 copies of the same be printed.

Report of the Secretary.

By direction of the School Committee, I submit to our fellow-citizens the following Report for the year 1893.

STATISTICS.

I. POPULATION AND VALUATION.

The population of the city (census of 1880) was	26,875
The population of the city (census of 1890) was	40,705
Estimated population of the city (Dec. 31, 1893,) is	50,000
Valuation of taxable property (1893) is	41,771,200

II. SCHOOL CENSUS.

School census, May, 1892 (children between five and fifteen years of age),	8,605
School census, May, 1893 (children between five and fifteen years of age),	9,466
Increase during the year (children between five and fifteen years of age),	861

SCHOOL CENSUS BY WARDS.

	1892.	1893.	Gain.
Ward One,	2,882	3,280	398
Ward Two,	727	784	57
Ward Three,	698	741	43
Ward Four,	489	499	10
Ward Five,	790	827	37
Ward Six,	3,019	3,335	316
	8,605	9,466	861

LOCATION OF CHILDREN BETWEEN FIVE AND FIFTEEN YEARS OF AGE, AS REPORTED BY THE CENSUS OFFICERS.

	Attending Public Schools.	Attending Private and Parochial Schools.	Attending no School.
Ward One,	1,166	1,525	589
Ward Two,	475	170	139
Ward Three,	614	49	78
Ward Four,	386	47	66
Ward Five,	563	164	100
Ward Six,	1,988	723	624
	5,192	2,678	1,596

The school census returns give a fair idea of the growth of the city. The reports show that there was an increase of 861 children in the city from June 1, 1892, to June 1, 1893, between the ages of five and fifteen years. This was 147 more than the gain of the preceding year, and indicates a gain of population in the city of 5000 persons during 1893.

The reports reveal the fact also that there were 454 more pupils not attending school between the ages of five and fifteen years than in the years 1891–92. Of these the greater number were children who had either completed their school time and were at work, or who were under compulsory school age. Of the 1,596 reported as not attending school 1,214 were in Wards One and Six.

The census reports indicate also that the private and parochial schools made the largest percentage of gain in enrollment, while the reports to me from the teachers of those schools show a large decrease. I cannot undertake to explain this discrepancy. Doubtless many pupils are reported from both the public and parochial schools. A number of private and parochial schools are carried on in the city which have never been approved by the School Committee. Some of them are known to fall far short of State requirements, and the large number of pupils in them makes the question of their efficiency a very important one.

Without question there are but few children in the city between the ages of eight and fourteen years who do not attend

school; but surely it is very unfortunate that so many children between the ages of five and eight are not in school. By absence from school at this period of their lives they lose valuable time and opportunity which can never be recovered.

III. SCHOOL ORGANIZATION.

High,	1
Training school for teachers,	1
Grammar,	5
Primary,	12
Country,	5
Mill,	2
	26

IV. SCHOOL BUILDINGS.

Occupied by the schools,	22

ROOMS USED FOR SCHOOL PURPOSES (DAY SCHOOLS), INCLUDING HALLS AND RECITATION ROOMS.

High,	17
Training,	9
Grammar,	40
Primary,	72
Mill,	4
Country,	9
Manual Training,	1
Rooms unoccupied,	8
Total,	160
Rooms used for both day and evening schools,	25
Rooms used for Evening Drawing school,	3

V. SEATS.

	Seats Occupied.	Seats Unoccupied.
High school,	395	12
Grammar schools,	1,583	310
Primary schools,	3,184	301
Training schools,	347	38
Mill schools,	116	20
Country schools,	229	66
Total	5,854	747

VI. TEACHERS.

Whole number in service, Dec. 22, 1893:

High school,	13
Training school,	11
Grammar schools,	40
Primary schools,	74
Country schools,	7
Mill schools,	4
Special teachers,	6
Temporary assistants,	2
Evening schools,	59
Total,	216

VII. PUPILS.

DAY SCHOOLS, 1893.

Whole number of pupils enrolled of all ages,	6,884
Average number pupils belonging,	5,543
Average daily attendance,	4,985
Per cent. of attendance,	89.9
Number of half-days' absence,	207,257
Number cases tardiness,	15,429
Number cases dismissal,	26,545
Number cases truancy reported by teachers,	218
Number cases corporal punishment,	986
Number cases of suspension,	11
Half-days' absence of teachers,	1,322
Number cases tardiness by teachers,	134
Number visits made the schools by the Superintendent,	451
Number visits made the schools by the School Committee,	481
Number visits made the schools by parents and others,	2,064

EVENING SCHOOLS, 1893.

Whole number pupils enrolled,	2,632
Average number belonging,	1,198.8
Average nightly attendance,	943.3
Per cent. of attendance,	70.3
Total nights' absence,	12,456
Number of cases tardiness,	881
Number visits by Superintendent,	16
Number visits by School Committee,	118

EVENING DRAWING SCHOOL, 1893.

Whole number pupils enrolled,	135
Average number belonging,	59.6
Average nightly attendance,	46.2
Per cent. of attendance,	77
Number visits made by the Superintendent,	3
Number visits made by School Committee,	6

COST OF INSTRUCTION PER SCHOLAR BY SCHOOLS.

In this connection the cost of instruction per scholar is based upon the average number belonging to each school during the year, and the amount expended for hire of teachers, fuel, care of school houses, books and supplies (except those furnished from the income of the Sylvia Ann Howland fund), the term "care of school houses" including only the salaries of janitors.

Elsewhere in the Report is given the cost, by departments, of each pupil, based on the average number belonging and the total amount expended for the maintenance of each department during the year. This last computation furnishes basis upon which tuition of non-residents will be collected.

TABLE 1. This table is computed, as in former Reports, on the items classified above.

The cost of maintenance of each pupil in the High school for the year has been,	$47.07
Grammar department:	
Fifth Street,	$27.05
Middle Street,	26.39
Parker Street,	23.43
Thompson Street,	22.18
Cedar Grove Street,	15.71
Harrington Training,	29.79
Primary department:	
Harrington Training,	$23.62
Acushnet Avenue,	14.56
I. W. Benjamin,	17.97

Cedar Street,	$19.28
Cedar Grove Street,	19.32
Cannonville,	19.36
Dartmouth Street,	17.43
Fourth Street,	17.52
S. A. Howland,	19.11
Linden Street,	17.21
Merrimac Street,	24.41
Maxfield Street,	19.89
Thompson Street,	17.42
Country schools:	
Acushnet,	$29.80
Clark's Point,	25.80
North,	34.89
Plainville,	31.07
Rockdale,	28.19
Mill schools:	
North Mill,	$35.88
South Mill,	27.33
Evening schools:	
Cedar Grove Street,	$5.51
Fifth Street,	4.27
Merrimac Street,	5.73
Parker Street,	8.61
Thompson Street,	4.46
Evening Drawing,	12.29
The average cost of a	
Grammar school pupil was	$24.69
Primary school pupil was	18.57
Country school pupil was	31.06
Mill school pupil was	31.07
Evening Elementary school pupil was	5.77
Evening Drawing school pupil was	12.29
The average cost of a day school pupil was	$23.04

TABLE 2. The average cost per pupil, by departments, based on the average number belonging and total expenditures for each department, was as follows:

High school,	$50 61
Grammar schools,	25.97
Primary schools,	20.17

Country schools,	$33.83
Mill schools,	35.23
Evening Elementary schools,	5.77
Evening Drawing school,	12.29
Average cost of a day school pupil,	$24.78
Average cost of an Evening school pupil, including Drawing school,	5.56

RECEIPTS AND EXPENDITURES FOR 1893.

RECEIPTS.

General and special appropriations as follows.	
For teachers salaries,	$96,000.00
Incidentals (including salaries of officers and janitors, books, supplies, fuel, etc.),	28,650.00
Repairs of buildings and furniture,	8,000.00
Special appropriations:	
Fitting and furnishing rooms at Dartmouth St., I. W. Benjamin, and S. A. Howland schools,	3,025.00
Cooking school,	600.00
Manual Training school,	1,000.00
	$137,275.00

EXPENDITURES.

For teachers' salaries:		
Day schools,	$94,051.57	
Evening schools,	4,739.43	
		$98,791.00
For incidentals:		
Salaries of officers, including truant officers and messenger,		$5,549.99
Salaries of janitors, day and evening schools,		11,452.11
Fuel for schools,		7,042.80
Books and supplies,		4,027.59
Heating apparatus,		1,847.53
Miscellaneous (including rent of School Committee rooms and other rooms used for school purposes, lighting evening schools, janitors' supplies, school furniture, etc.),		5,936.12
For repairs of buildings and furniture,		6,210.44
For fitting and furnishing new rooms at Dartmouth St., I. W. Benjamin, and S. A. Howland schools,		2,839.28
For Cooking school,		561.10
For Manual Training,		11.57
		$144,269.53

Summary:		
Receipts,	$137,275.00	
Transferred from unappropriated funds,	5,967.20	
Unappropriated balance for manual training and cooking carried forward to 1894,	1,027.33	$144,269.53

DOG FUND.

Balance, Jan. 1, 1893,	$3,195.04	
Received, Feb., 1893,	1,206.40	$4,401.44
Expenditures for 1893,		1,095.16
Balance,		$3,306.28
Received from non-resident pupils, which has been paid to City Treasurer and placed to account of unappropriated funds,	$992.22	
Received from sale of books and supplies,	16.03	$1,008.25

SYLVIA ANN HOWLAND EDUCATIONAL FUND.

Balance of income on hand, Jan. 1, 1893,	$311.98
Interest for the year,	3,000.00
	$3,311.98
Expenditures for the year,	3,104.73
Balance, Jan. 1, 1894,	$207.25
Cost of books and supplies during 1893,	$3,104.73
Cost of books and supplies in stock, Jan. 1, 1893,	189.23
	$3,293.97
Cost of books and supplies charged to schools, 1893,	$2,953.55
Cost of books and supplies in stock, Jan. 1, 1894,	336.72
Cash receipts from sale of supplies,	3.69
	$3,293.96

Disbursements to the several schools, and otherwise, are as follows:

High school,	$480.36
Fifth Street Grammar school,	198.06
Middle Street Grammar school,	111.72
Parker Street Grammar school,	186.75
Thompson Street Grammar school,	168.26

Linden Street Primary school,	$52.53
Merrimac Street Primary school,	57.34
Maxfield Street Primary school,	38.72
Cedar Street Primary school,	73.02
Acushnet Avenue Primary school,	73.23
S. A. Howland Primary school,	27.49
Fourth Street Primary school,	41.67
Dartmouth Street Primary school,	107.16
Cedar Grove Street Primary school,	281.38
Harrington Training school,	92.70
Acushnet school,	42.25
Cannonville Primary school,	13.11
Clark's Point school,	19.93
North school,	108.98
Plainville school,	17.36
Rockdale school,	87.79
North Mill school,	2.72
South Mill school,	2.31
I. W. Benjamin Primary school,	97.41
Drawing teacher,	.75
Care of musical instruments,	329.00
Express and freight,	76.00
Pedagogical library,	9.91
Covering and binding books,	90.69
Miscellaneous supplies,	55.95
Cash sales,	12.69
Stock on hand, Jan. 1, 1894,	336.72
	$3,293.96

DETAILED STATEMENT.

Outlay by the School Committee from the income of the Sylvia Ann Howland fund, from Jan. 1, 1893, to Jan 1, 1894:

BOOKS AND PERIODICALS.

American Book Co.,	$84.71
Boston School Supply Co.,	57.21
Century Publishing Co.,	7.50
Educational Publishing Co.,	31.70
Educator, The	13.00
Ginn & Co.,	201.86
Goldthwaite, William M.	8.65
Houghton, Mifflin & Co.,	127.84
Heath, D. C. & Co.,	28.73

Hutchinson, H. S. & Co.,	$148.36	
Harper & Bros.,	3.68	
Knowlton, McLeary & Co.,	3.00	
Lee & Shepard,	97.99	
Leach, Shewell & Sanborn,	44.70	
Lothrop, D. & Co.,	.80	
Miller, Samuel E.	4.00	
Massachusetts Society for Prevention of Cruelty to Animals,	1.00	
N. E. Publishing Co.,	17.50	
Putnams, G. P. & Sons,	32.00	
Russell Publishing Co.,	2.00	
Silver, Burdett & Co.,	48.34	
Sheldon & Co.,	12.50	
Schoenhof & Co.,	8.60	
Taber, R. W.	121.76	
University Publishing Co.,	31.47	
Youths' Companion,	81.39	$1,220.29

PEDAGOGICAL LIBRARY.

Hutchinson, H. S. & Co.,	$8.20	
Silver, Burdett & Co.,	.91	
Taber, R. W.	.80	9.91

MUSIC DEPARTMENT.

Ditson, Oliver & Co.,	$4.50	
Ginn & Co.,	354.64	
Heath, D. C. & Co.,	15.00	
Peirce, George	329.00	
Silver, Burdett & Co.,	77.81	
White, Smith & Co.,	13.60	794.55

BINDING AND COVERING BOOKS.

Gammons, Charlotte M.	$4.60	
Gibbs, Elizabeth	1.15	
Holden Patent Book Cover Co.,	249.57	
Kane, D. J.	66.14	
Merrick, Emma J.	4.60	
Perry, Geo. S. & Co.,	31.00	
Potter, Hattie	4.60	
Potter, Francis	4.60	
Watrous, Joseph	32.88	
Wing, Charles F.	1.00	400.14

PRIMARY DEPARTMENT.

Anthony, E. & Sons,	$2.50	
Hammett, J. L.	5.32	
Perry, Geo. S. & Co.,	134.43	$142.25

EXPRESS AND FREIGHT.

Gray, Chas. A.	$10.69	
Hatch & Co.,	36.50	
Heath, D. C. & Co.,	.25	
Jennings, W. A.	28.50	
Silver, Burdett & Co.,	.06	76.00

APPARATUS.

Blossom, A. C.	$5.00	
DeWolf & Vincent,	2.80	
Eimer & Amend,	3.22	
Franklin Educational Co.,	7.40	
Hall, Thomas & Sons,	7.00	
Haskins, Chas. N.	5.00	
Haskins, Herbert H. K.	15.00	
N. B. Gas & Edison Light Co.,	.72	
Purrington, Brown and Richards,	1.60	
Strange, F. W.	4.50	
Stanley, N. A.	.50	52.74

MISCELLANEOUS.

Boston School Supply Co.,	$57.00	
Bliss & Nye,	.30	
Blake, James E.	1.96	
Caproni, P. P. & Bro.,	12.93	
Educational Publishing Co.,	.84	
Franklin Educational Co.,	.10	
Frazer, Geo. B.	.50	
Ginn & Company,	8.50	
Hayes, N. P.	17.50	
Hammett, J. L.	142.00	
Hillman & Washburn,	7.95	
Heath, D. C. & Co.,	9.07	
Lumbard, A. M.	26.00	
McAllister, T. H.	94.95	
Mercury Publishing Co.,	2.40	
Perry, George S. & Co.,	22.10	
Richter, George H. & Co.,	.75	
Taber, R. W.	4.00	408.85
		$3,104.73

The income of this fund has been expended, as in preceding years, in accordance with the terms of the bequest as interpreted by the Committee. This income is a relief in that amount to the sum required to carry on the schools; for the articles purchased for our schools from this fund, although not required by the State laws, are now considered necessities in well equipped schools and are furnished in the progressive cities from the general fund. If the income from this fund was reduced, either the schools would suffer, or it would be a simple shifting of the city's liabilities.

TEXT-BOOKS AND SUPPLIES.

STATEMENT.

Cost of books and supplies purchased during 1893,	$4,027.59
Cost of books and supplies in stock, Jan. 1, 1893,	1,613.14
	$5,640.73
Cost of books and supplies charged to schools in 1893,	$4,328.52
Cost of books and supplies in stock, Jan. 1, 1894,	1,296.18
Cash receipts from sale of books and supplies,	16.03
	$5,640.73

The cost in detail of books and supplies furnished the several schools for the year 1893 is as follows:

	Supplies.	Books.	Total.
High school,	$509.77	$487.47	$997.24
Fifth Street Grammar school,	274.15	271.12	545.27
Middle Street " "	216.90	227.15	444.05
Parker Street " "	256.61	266.93	523.54
Thompson St. " "	181.99	64.32	246.31
Harrington Training "	88.30	55.03	143.33
Acushnet Avenue Primary school,	73.85	56.31	130.16
I. W. Benjamin " "	92.27	50.98	143.25
Cedar Street " "	47.02	20.50	67.52
Cedar Grove Street " "	91.65	101.13	192.78
Cannonville " "	21.13	11.11	32.24
Dartmouth Street " "	62.65	76.02	138.67
Fourth Street " "	45.69	26.11	71.80
Linden Street " "	28.09	23.56	51.65
Merrimac Street " "	33.22	26.53	59.75

Maxfield Street Primary school,	$30.11	$19.01	$49.12
S. A. Howland "	21.85	17.08	38.93
North Mill "	12.20	4.68	16.88
South Mill "	12.03	18.90	30.93
Acushnet "	33.54	71.98	105.52
Clark's Point "	19.24	6.95	26.19
North "	25.59	29.27	54.86
Plainville "	13.94	2.03	15.97
Rockdale "	29.41	29.06	58.47
Cedar Grove Street Evening "	15.31	29.71	45.02
Parker Street " "	5.18	9.48	14.66
Fifth Street " "	7.94		7.94
Merrimac Street " "	5.94	12.76	18.70
Thompson Street " "	10.29	24.58	34.87
Evening Drawing "	22.90		22.90
	$2,288.76	$2,039.76	$4,328.52

The average cost per pupil in the different departments of the schools, for books and supplies, has been as follows:

High school,	$2.58
Grammar schools,	1.14
Primary schools,	.34
Country schools,	1.28
Mill schools,	.45
Average for day schools,	.75
" " evening schools,	.12
" " " Drawing school,	.38

SCHOOL ACCOMMODATIONS.

In most rapidly growing cities it is a difficult matter for the School Department to secure accommodations for the pupils as soon as needed. If the School Department acts promptly there is usually delay on the part of the City Government in making the appropriations for the required buildings and contracting for the same.

New Bedford is no exception to this rule. Six rooms of the Acushnet Avenue school have been closed, and will remain so for some months, the pupils being without a school habitation for that time, owing to the delay in beginning the alter-

ations in that building. Had the work been begun at the commencement of the summer vacation the present unfortunate situation might have been avoided to a great extent. When the addition is completed we shall have a ten-room building available, where formerly there was a six-room building.

The Fourth Street building, an old wooden structure of six rooms, is being replaced by a fine eight-room brick building. While this building is being erected the primary pupils of this district are accommodated in the Fifth Street Grammar building—the hall being utilized to provide for them—and in the abandoned William Street Primary school house.

The changes in the Acushnet Avenue school house, and the rebuilding of the Fourth Street school house, are in line of the recommendations made in last year's report. It is unfortunate, however, that so expensive a building as the new one of the Fourth Street school should be built upon a lot so small that every foot of ground space is occupied by the building, having no play-ground whatsoever. It is also so near the surrounding buildings that the free admission of light is interfered with, as well as a good circulation of air about the building.

In the south part of the city the facilities have been increased during the year by the addition of a room in the third story of the Thompson Street school house. The pupils of two rooms from the Acushnet Avenue school are now housed in the attic of the Thompson Street school house, necessitating the use of the front entry-way for one of the Mill schools. Practically, therefore, but one extra room, and that in the attic, will be at the disposal of the School Department in the south part of the city, with which to meet the natural increase the coming year. It is none too early to secure a suitable lot in that section upon which to erect a school house in the near future. Unless the city ceases to grow in that direction, a building will be needed there before it is built, and children will be clamoring for admission who cannot be accommodated.

In the north-west part of the city there is already an overflow, in the Linden Street building, and for more than a year a section of this school has been housed in a church on Weld street. The Linden Street school house is one of the few remaining in the city of the old type. It has low ceilings, one narrow hall, and no methods of ventilation, except by windows. While not seriously uncomfortable, it is old, inadequate in size, and not of such construction as to admit of enlargement.

In closing, I wish to emphasize the point that the School Committee does not recommend the construction of costly school houses. It considers the Thompson Street school house a good type. It is sufficiently ornate, is well lighted, has wide corridors, and the rooms are all attractive and comfortable. This building, with eight rooms and a roomy third story, wherein two rooms have since been fitted, cost less than $30,000.

Respectfully submitted,

WILLIAM E. HATCH,

Secretary.

In School Committee,
December 29, 1893.

On motion of Mr. Godfrey:

Resolved, That the Board expresses its thanks to the Superintendent and Secretary for the faithful discharge of his duties and his uniform courtesy to the Committee.

On motion of Mrs. Borden:

Resolved, That the thanks of the Board are extended to Mayor Brock for the ability and impartiality with which he has presided at the meetings of the year, and for his unvarying courtesy to the members.

On motion of Dr. Pothier:

Resolved,, That this Board thanks its Vice-Chairman for the dignity and urbanity with which he has performed the duties of his office during the past year.

NEW BEDFORD HIGH SCHOOL GRADUATING EXERCISES JUNE 30, 1893.

PRAYER.

1. DAMASCUS TRIUMPHAL MARCH, From "Naaman." *(Costa.)*
2. SALUTATORY ADDRESS, Maud Almy.
3. ORATION, "The Rise of the Laboring Man," Clarence P. Emery.

MUSIC.

4. CHORUS, "Abide with Me." *(Bennett.)*
5. ESSAY, "The Utility of Fiction," Mabel P. Nichols.

MUSIC.

6. CHORUS, "Song of the Vikings." *(Faning.)*
7. BOURNE PRIZE ESSAY, "The Annexation of Hawaii," Carrie N. Ellis.

MUSIC.

8. PART SONG, "The Image of the Rose." *(Reichardt.)*
9. PRESENTATION OF DIPLOMAS, His Honor, Mayor Brock.
10. PARTING SONG. { Words by Grace L. Bennett. / Music arranged by C. Fred. Clarke, Jr.

We are gathered here, dear classmates,
On our Graduation Day;
We now pass the bounds of school-life,
With its clouds and sunshine gay.

'Though our fondest ties we sever,
As we breast life's troubled sea,
We must part—perhaps forever.
Farewell, Class of Ninety-Three.

What shall coming years accord us?
Duties earnest, joy or care?
Loving friendships, or sad burdens,
Seeming oft too great to bear?

Ah! Life's sands are ever shifting;
Mists will fall 'twixt heart and heart,
As we watch our classmates drifting
Slowly, surely, far apart.

But faith sees a grand reunion
When we stand 'neath Heaven's dome,
When, our tasks and toils well ended,
The Great Teacher calls us home.

11. VALEDICTORY,* Carrie N. Ellis.

*Charles N. Haskins, who, if present, would be the Valedictorian, is to-day taking examinations at the Mass. Institute of Technology.

GRADUATES.

"Be self-reliant."

Clayton Albiston,
Joseph Henry Allen,
Herbert Tompkins Blake,
Thomas Jefferson Brady,
Charles Frederick Clarke, Jr.,
Allen Swift Crocker,
Clarence Percy Emery,
Joseph Anthony Frasier,
William Gordon,
Charles Nelson Haskins,
George Coggeshall Hatch, Jr.,
Charles Augustine Irving,
Harrie Bradford Jennings,
John McCullough Kelleher,
Holder Crary Kirby,
Edward Norris Milliken,
Charles Alexander Morrison,
Frank Winfred Morse,
Frank Bridgham Perry,
Frederic Russell Smith,
William Boulay Smith, Jr.,
George Thomas Sperry,
Rodolphus Ashley Swan,
Everett Clifton Tripp,
Frank Bertram Wade,
Winfred Reuel Washburn,
William Joshua Weeks.

Maud Almy,
Ruth Potter Almy,
Emma Ashley,
Julia Bancroft,
Grace Loring Bennett,
Annie Deborah Borden,
Estella May Carter,
Maria Almy Chadwick,
Mabel Kempton Crapo,
Susan Allen Croacher,
Sadie Howard Dexter,
Isabelle Eva Duddy,
Carrie Naomi Ellis,
Laura Ward Estes,
Martha Ellen Evans,
Amy Maria Fanning,
Sarah Eliza Faunce,
Ada Louise Field,
Mary Eleanor Gibbs,
Ida Augusta Gifford,
Sarah Anthony Gifford,
Helen Gertrude Harwood,
Emma Louise Hathaway,
Adaline Elzadah Hawes,
Elizabeth Clarke Holmes,
Grace Evelyn Johnson,
Estella Elizabeth King,
Laura Clarke McCabe,
Mabel Parker Nichols,
Esther Warren Paul,
Annie Ellen Payne,
Sadie Peckham,
Mabel Maxfield Post,
Anna Congdon Potter,
Mary Church Potter,
Mary Leonore Rogers,
Addie Matthews Smalley,
Mabel Florence Springer,
Daisy Anita Sweet,
Hattie Augusta Taylor,
Grace Cushing Terry,
Luella Richmond Tripp,
Ruth Almyra Wilde.

RECIPIENTS OF CERTIFICATES.

Leslie Chapman Allen,
Lloyd Alvin Cutler,
Mabel Bartlett Lewis,
Helen Louise Reynolds,
Annette Bird Russell,
Mary Anna Taber.

NEW BEDFORD PUBLIC SCHOOLS.

RATES OF TUITION FOR NON-RESIDENT PUPILS, 1894.

	First Term.	Second Term.	Third Term.	For the Year.
High school,	$15.18	$15.18	$20.25	$50.61
Grammar schools,	7.80	7.79	10.38	25.96
Primary schools,	6.05	6.05	8.07	20.17
Ungraded schools,	10.14	10.14	13.55	33.83
Evening Drawing school,				12.29

RULES GOVERNING TEACHERS' SALARIES.

	Maximum.	Minimum.
Principal of High school,	$2,750	
Sub-master of "	1,600	
Teacher of science of "	1,600	
Lady assistants of "	900	$650
Teacher of drawing and assistant in English at High school,		700
Military instructor of High school,	300	
Principals of grammar schools,	1,900	
Assistants of grammar schools,	600	425
Principals of primary schools,	600 to 800	
Assistants of primary schools,	550	375
Principal of Training school,	1,500	
Assistant principal of Training school,	1,000	
Seniors in Training school,	4 per week.	
Juniors in Training school,	3 "	
Ungraded schools,	525 to 700	
Principals of evening schools,	3 per night.	
Assistants of evening schools,	1.50 "	
Supervisor of drawing in grammar and primary schools,	1,200	
Supervisor of music,	1,700	
Teacher of sewing,	600	
Assistants at the rate of	525	
Cooking teacher,	600	

The salary of a primary school principal of a four-room building is $600 per year, which is increased at the rate of $25 for each additional room.

The salaries of assistant teachers in the High school are increased at the rate of $50 per year until the maximum is reached.

The minimum yearly salary of a grammar school assistant is fixed at $425, and the yearly advance is $25 per year until a yearly salary of $500 is reached; the annual increase is then $50 per annum until the maximum ($600) is reached.

The minimum yearly salary of a primary school assistant is fixed at $375, and the yearly advance is $25 per year until a yearly salary of $450 is reached; the annual increase is then $50 per annum until the maximum ($550) is reached.

DEPARTMENT OF PUBLIC SCHOOLS.

BRIEF DESCRIPTION OF THE SCHOOL HOUSES, WITH THEIR ACCOMMODATIONS AND CONDITIONS.

	Schools.	Material.	No. of Stories.	No. of School Rooms.	No. of Recitation Rooms.	No. of Assembly Halls.	No. of Seats.	Condition.
1	Acushnet Avenue,	brick,	2	9			428	Good. Is being enlarged.
2	Acushnet,	wood,	2	3			114	Good.
3	I. W. Benjamin,	brick,	3	12			589	Good.
4	Cedar Street,	wood,	2	6			287	Good.
5	Cedar Grove Street,	brick,	3	15			692	Good.
6	Cannonville,	wood,	2	2			87	Fair.
7	Clark's Point,	wood,	1	1			35	Fair.
8	Dartmouth Street,	wood,	2	8			392	Good.
9	Fifth Street,	brick,	3	10		1	490	Good. [room br'k bldg.
10	Fourth Street,							Is being replaced by an 8-
11	High,	brick,	3	9	4	1	407	Good.
12	Harrington Training,	brick,	3	8		1	385	Good.
13	Sylvia Ann Howland,	brick,	3	6			196	Good.
14	Linden Street,	wood,	2	4			234	Fair.
15	Merrimac Street,	brick,	2	6			270	Good.
16	Middle Street,	brick,	3	9		1	413	Good.
17	Maxfield Street,	brick,	2	4			203	Good.
18	North,	wood,	1	2			68	Good.
19	Parker Street,	brick,	3	12		1	537	Good.
20	Plainville,	wood,	1	1			28	Fair.
21	Rockdale,	wood,	1	2			50	Good.
22	Thompson Street,	brick,	3	11			424	Good.
23	William Street,	wood,	2	4			273	Old and poor.

DEPARTMENT OF PUBLIC DAY SCHOOLS.

REPORT FOR YEAR BEGINNING JANUARY 9, 1893, ENDING DECEMBER 22, 1893.

	Name of School.	Total Enrollment for month.		Average No. Belonging.	Average Daily Attendance.	Per cent. of Attendance.	Total Half-Days Absence.	No. Cases of Tardiness.	No. Cases of Dismissal.	No. Cases of Truancy.	No. Cases of Suspension.	No. Cases of Corporal Punishment.	Half-Days Teacher was Absent.	Times Teacher was Tardy.	No. Visits by Superintendent.	No. Visits by Members Committee.	No. Visits by others.
		Boys	Girls														
1	High.	210	307	386	365.6	94.7	3,964	595	1,442				35	23	17	53	36
2	Fifth Street Grammar.	260	247	395	365	92.4	12,177	965	1,380	12	1	49	97	10	38	68	378
3	Middle " "	200	247	371.7	345.3	92.9	10,622	1,074	561	14	3	113	112	4	20	35	106
4	Parker " "	249	272	486.8	446.1	92.1	15,608	1,712	1,073	13		19	261	9	50	51	118
5	Thompson St. "	140	139	210.2	195.5	93	7,997	303	176	10		28	11	8	33	50	228
6	Thompson St. Primary.	51	48	87	79	90.8	2,312	87	81	6		13	3		5	6	19
7	Harrington Grammar.	35	43	68.3	62.6	91.6	2,287	485	260			5			10	6	78
8	" Primary,	160	137	256.5	229.4	89.4	10,999	1,448	345			40	170	14	32	9	384
9	Acushnet Ave. Primary.	223	265	410	366	89	17,536	1,511	311	5		126	70	2	29	12	60
10	I. W. Benjamin "	351	320	515	462	89.7	21,694	944	10,760	3		105	74	9	20	13	93
11	Cedar Grove St. "	277	277	390.2	330.1	84.6	23,008	907	3,111	50		17	153	5	47	34	17
12	" " " Grammar,	53	49	86.9	77.8	89.5	2,801	296	45	11	1	10	6	2	11	2	5
13	Cedar Street Primary,	140	144	251.1	219.8	87.5	12,470	407	290	19		32	27	3	16	4	76
14	Cannonville "	43	35	71.2	65.6	92.3	2,203	179	41			7	5	1	4	8	47
15	Dartmouth St. "	211	201	333.1	293.5	88	15,945	581	788	22	1	110	130		29	3	119
16	Fourth St. "	124	139	243	214	88	11,632	972	497	14		41	36	24	14	15	21
17	S. A. Howland "	94	82	161	139.4	88.1	8,010	587	105	14		41	36		20	31	46
18	Linden St. "	125	111	209.6	186.8	89	8,666	623	3,758	5		55		2	12	4	19
19	Merrimac St. "	84	83	130	116	89.5	5,790	247	692	4		11	6		10	12	28
20	Maxfield St. "	93	99	172	154	90	7,287	604	314	5		67	4		8	14	71
21	North Mill,	63	47	46	39.6	85.8	2,255	210	49	6		8	15	5	5	14	16
22	South Mill,	88	67	59	53	91	2,508	61	24			43	36		6	16	34
23	Acushnet,	56	51	87	79	92	2,744	288	119			11	5	1	6	2	46
24	Clark's Point,	20	14	26.4	23.2	88.2	1,315	127	143			3	11	9	2	4	33
25	North,	25	27	38	34	91	1,854	36	48			1	16	2	2	4	7
26	Plainville,	16	5	18.3	15.3	83.8	1,075	106	75	4	5	13	1		2	5	6
27	Rockdale.	18	19	34.4	28.1	84.1	2,498	74	57	1		12	2	1	3	6	9
	Grand Totals,	6,884		5543.1	4985.7	89.9	217257	15,429	26,545	218	11	986	1,322	134	451	481	2,100
		3,409	3,475														
	1892,	6,713		5379.4	4822.7	89.6	194535	12,855	18,422	191		911	1,793	215	483	712	2,902

DEPARTMENT OF PUBLIC EVENING SCHOOLS.

REPORT FOR YEAR BEGINNING JANUARY 9, 1893, ENDING DECEMBER 22, 1893.

Name of School.	Total Enrollment.		Average No. Belonging.	Average Nightly Attendance.	Per Cent. of Attendance.	Total Nights Absence.	No. Cases of Tardiness.	No. Cases of Dismissal.	Nights Teacher was Absent.	Times Teacher was Tardy.	No. Visits by Superintendent.	No. Visits by Members of Committee.	No. Visits by Parents and others.
	Boys.	Girls.											
Cedar Grove Street,	468	313	363	307	82.2	2,567	218	3	19	2	11	79	
Fifth Street,	367	174	312.4	222		4,485	376	17		2		13	
Merrimac Street,	277	100	158.8	130.3	81.4	1,335	87		1	1	4	22	14
Parker Street,	159	85	93.2	69.6	75.1	1,075							
Thompson Street,	411	278	271.4	214.4	79	2,994	200		12	2	5	4	
	1682	950	1198.8	943.3		12,456	881	20	32	7	20	118	
Evening Drawing,	122	13	59.6	46.2	77				1		3	6	

CALENDAR, 1894.

Winter term begins Jan. 8, 1894; ends March 30, 1894.
Summer term begins April 9, 1894; ends June 29, 1894.
Fall term begins Sept. 4, 1894; ends Dec. 21, 1894.

VACATIONS.

March 31, 1894, to April 8, 1894.
June 30, 1894, to Sept. 4, 1894.
Dec. 22, 1894, to Jan. 7, 1895.

HOLIDAYS.

Every Saturday; Washington's Birthday; Fast Day; Memorial Day; from Wednesday noon before Thanksgiving the remainder of the week.

SCHOOL SESSIONS.

From March 1 to November 1, 9 A. M. to 11.45 A. M., and 2 P. M. to 4.15 P. M., in the grammar schools; 9 A. M. to 12 M., and 2 P. M. to 4 P. M., in the primary schools.

From November 1 to March 1, the afternoon sessions are from 1.30 o'clock to 3.45 o'clock in the grammar and 1.30 to 3.30 in the primary schools.

High school, 8.30 A. M. to 1.30 P. M., during the whole year.

The signal 22 (that is, two strokes, an interval, and the two strokes repeated) sounded on the fire alarm at 8.15 A. M. will indicate no school in the primary and grammar grades and in the Acushnet school in the forenoon. The same signal sounded at 12.45 P. M. will indicate no school in the primary and grammar grades and in the Acushnet school in the afternoon. If the signal is sounded at 8.15 A. M. and not repeated at 12.45 P. M., there will be a school session in the afternoon. This regulation does not apply to the High school or to the country schools except the Acushnet school.

TEXT-BOOKS USED IN THE HIGH SCHOOL.

Appleton's Young Chemist.
Remsen's Chemistry.
Dalton's Physiology and Hygiene.
Dana's Geological Story Briefly Told.
Gillet & Rolfe's Astronomy.
Packard's Zoology.
Avery's Natural Philosophy.
Youman's Botany.
Apgar's Plant Analysis.
Guyot's Physical Geography.
Robinson's Arithmetic, Part II.
Wentworth's Elementary Algebra.
Wentworth's School Algebra.
Wentworth's New Plane Geometry.
Wentworth's Plane and Solid Geometry.
Wentworth's Plane Trigonometry.
Meservey's Bookkeeping.
Meservey's Bookkeeping Blanks.
D. J. Hill's Rhetoric and Composition.
Lockwood's English.
Hutchison's Physiology and Hygiene.
Underwood's American Authors.
Underwood's British Authors.
Brook's English Literature.
Dowden's Shakespeare.
Monroe's Sixth Reader.
Barnes' History of Ancient Peoples.
Swinton's Outlines World's History.
Martin's Civil Government.
Collar & Daniell's Beginners' Latin Book.
Jones' First Lessons in Latin.
Harkness' Latin Grammar.
Allen & Greenough's Cæsar.
Greenough's Virgil.
Harkness' Cicero.
Jones' Latin Prose Composition.
White's First Lessons in Greek.
Goodwin's Greek Grammar.
Jones' Greek Prose Composition.
Goodwin's Zenophon and Herodotus.
Boise's Homer's Iliad.
Autenrieth's Homeric Lexicon.
Crosby's Greek Lexicon.

Van Daell's French Grammar.
Keetel's French Reader.
Roulier's First Book French Composition.
Hennequin's Idiomatic French.
Spiers & Surenne's French Dictionary.
Sauveur's Causeries avec mes Elèves.
Wenckebach's Deutsche Grammatik.
Heness' Der Neue Leitfaden.
Grimm's Haus Märchen.
Goethe's Hermann and Dorothea.
Ahn Henn's German Rudiments.
Otto's German Grammar.

TEXT-BOOKS USED IN THE GRAMMAR SCHOOLS.

Franklin New Third Reader.
Franklin New Fourth Reader.
Franklin New Fifth Reader.
Franklin Sixth Reader.
Bradbury s Eaton's Elementary Arithmetic.
Bradbury's Eaton's Practical Arithmetic.
Seaver and Walton's Mental Arithmetic.
Warren's Common School Geography.
Harper's Introductory Geography.
Worcester's School Dictionary.
Barnes' History U. S.
Hyde's Language Lessons, Part I.
Hyde's Language Lessons, Part II.
Hyde's Language Lessons, Advanced.
Harrington's Speller, Parts I and II.
Child's Health Primer.
Prang's Drawing Books.
Harper's Writing Books.

TEXT-BOOKS USED IN THE PRIMARY SCHOOLS.

Franklin New First Reader.
Franklin New Second Reader.
Franklin New Third Reader.
Harrington's Speller, Part I.
Prang's Drawing Books.
Harper's Writing Books.

SUPPLEMENTARY BOOKS FOR READING AND STUDY USED IN THE GRAMMAR SCHOOLS.

Eggleston's First Book in American History.
Higginson's History of the United States.
Goodrich's Child's History of the United States.
Dickens' Child's History of England.
Andersen's Historical Reader.
Collier's British History.
McKenzie's America.
Ballou's Footprints of Travel.
Sea Side and Way Side, Part 2.
Sea Side and Way Side, Part 3.
Child's Book of Nature, Parts 1, 2, 3, 4.
Choice Readings in Nature's Book.
Johonnot's Geographical Reader.
Scribner's Geographical Reader.
Our World, Part 1.
Our World, Part 2.
Fables and Folk Stories.
Kingsley's Water Babies.
Longfellow Leaflets.
Tanglewood Tales.
Grandfather's Chair.
True Stories.
Robinson Crusoe.
Golden Book of Choice Readings.
American Authors.
Swinton's Book of Tales.
Swinton's Supplementary Reader.
Swinton's American Classics.
Swinton's English Classics.
Swiss Family Robinson.
McGuffey's Fourth Reader.
McGuffey's Fifth Reader.
McGuffey's Sixth Reader.
Harvey's Fourth Reader.
Sheldon's Fourth Reader.
Sheldon's Fifth Reader.
Royal Fourth Reader.
Washington Irving's Sketch Book.
Lincoln's Gettysburg.
Arabian Nights.
Vicar of Wakefield.

King of the Golden River.
Church's Old World Stories.
Hans Brinker.
Black Beauty.
Little Men.
Little Flower People.
Little Lord Fauntleroy.
Heroic Ballads.
At the Back of the North Wind.
Stories of Industry.
Blue Jackets of 1776.
Blue Jackets of 1812.
Blue Jackets of 1861.
World at Home, Europe.
World at Home, The World.
Peasant and Prince.
Prince and Pauper.

SUPPLEMENTARY READING BOOKS USED IN THE PRIMARY SCHOOLS.

Monroe's Primer.
Monroe's First Reader.
Monroe's Second Reader.
Monroe's Third Reader.
Parker & Marvel's First Book.
Parker & Marvel's Second Book.
Sheldon's Second Reader.
Sheldon's Third Reader.
Appleton's First Reader.
Appleton's Second Reader.
Appleton's Third Reader.
Swinton's Second Reader.
Swinton's Third Reader.
Willson's First Reader.
Willson's Second Reader.
Willson's Third Reader.
Butler's First Reader.
Butler's Second Reader.
Stickney's First Reader.
Stickney's Second Reader.
Holmes' First Reader.
Holmes' Second Reader.
Harper's First Reader.

Harper's Second Reader.
Normal Primer.
Normal First Reader.
Barnes's First Reader.
Barnes's Second Reader.
Barnes's Third Reader.
Modern Second Reader.
First Term's Work in Reading.
Easy Steps for Little Feet.
Seven Little Sisters.
Each and All.
Andersen's Fairy Tales.
Robinson Crusoe (in one syllable).
King's Picturesque Geography.
Sea Side and Way Side, Part 1.
Baker's Young Folks' Geography.

SUPPLEMENTARY BOOKS USED IN THE HIGH SCHOOL.

Wells' University Algebra.
Chauvenet's Geometry.
Walpole's Vergil, Book 1.
Sprague's Masterpieces in English Literature.
Scott's Poems.
Rolfe's Lady of the Lake.
Sprague's Paradise Lost, Books 1 and 2.
Hudson's Shakespeare, Vols. 1 and 2.
Rolfe's Midsummer Night's Dream.
Rolfe's Childe Harold.
Collier's History of English Literature.
Lay of the Last Minstrel.
Vicar of Wakefield.
The Merchant of Venice.
Shakespeare, by R. Grant White.
Martin's English Language.
Strang's Exercises in English.
Modern Classics:
Goldsmith, Cowper and Heman's.
Fouque and St. Pierre.
Byron and Hood.
Tennyson.
Burns and Scott.

Fields and Hawthorne.
Holmes and Brown.
Howells.
Campbell and Rogers.
Carlyle, Lamb and Southey.
Wordsworth and Coleridge.
Dickens and Fields.
Longfellow.
Whittier.
Lowell.
Hawthorne and Carlyle.

Thackeray's Essays on Swift, Congreve, and Steele.
Macaulay's Life and Writings of Addison.
The Four Georges, Thackeray.
Thackeray's Essays on Prior, Gay, Pope, Hogarth, Smollette, Fielding, Sterne and Goldsmith.
Milton and Byron, Macaulay.
Sir Roger de Coverly, from Spectator.
Macaulay's Essay on Johnson.
Macaulay's Essays on Goldsmith, Bunyan and Madame D'Arblay.
Goldsmith's Plays.
Goldsmith's Poems.
Heath's German Dictionary.
Boisen's German Prose.
Wenebach's Anschauung's Unterricht.
Aus dem Legen eines Taugenichts, Eichendorff.
Johnson's Schiller's Ballads.
Sauver's Contes Merveilleux.
Le Roi des Montagnes, About.
La Littérature Française Contemporaine, by Pylodet.
La Littérature Française Classique, Mennechet.
Emerson's Essays.
Swinton's Word Analysis.
Swinton's School Composition.
Irving's Sketch Book.
Franklin's Autobiography.
American Poems.
About Old Story Tellers.
Anderson's Historical Readers.
La Tour de la France.
Perry's Bible Manual.
Seaver and Walton's Metric System.
Sawyer's Metric System.
Model Etymology, Webb.
Stein's German Exercises.

Kellogg's Rhetoric.
Smith's Principia Latina.
Craik's English of Shakespeare, Julius Cæsar.
Jackson's Mathematical Geography.
Super's French Reader.
Merimee's Columba.
Von Riehl's Der Fluch der Schonheit.
Shaler's First Book in Geology.
Collar's Practical Latin Composition.
Grey's Lessons in Botany.
Woodruff's Exercises in Greek Prose Composition.
Sir Roger de Coverly Papers.
Earl of Chatham, Macaulay.
Courtship of Miles Standish.
Emerson's American Scholar.
Comus.
Lodge's Mechanics.
Allen's Laboratory Manual.
Hall and Bergen's Physics.
The House of the Seven Gables.
Fisk's Civil Government.
Luquien's French Prose.
Hermann and Dorothea.

SCHOOL BOARD, 1893.

JETHRO C. BROCK, Mayor, Chairman, *ex-officio*.

WILLIAM H. PITMAN, Vice-Chairman.

WILLIAM E. HATCH, Secretary and Superintendent.

SAMUEL C. HART, President of Common Council, *ex-officio*.

Ward 1—Anna R. Borden, John H. Lowe, Lewis E. Bentley.
Ward 2—Edward T. Tucker, Isaac B. Tompkins, Jr., Frank A. Milliken.
Ward 3—Stephen H. Shepherd, William R. Channing, William H. Pitman.
Ward 4—George H. Dunbar, William E. Brownell, Seth W. Godfrey.
Ward 5—Robert W. Taber, Jonathan Howland, Jr., William L. Sayer.
Ward 6—Joseph C. Pothier, Betsey B. Winslow, Francis M. Kennedy.

STANDING COMMITTEES.

WILLIAM E. HATCH, Secretary.

The first named on each standing committee is Chairman of the same.

On High School—Pitman, Dunbar, Miss Winslow, Mrs. Borden, Tompkins, Shepherd, Sayer, Howland.

On Grammar Schools—Tompkins, Pitman, Howland, Dunbar, Mrs. Borden, Lowe, Sayer, Milliken, Channing.

On Primary Schools—Shepherd, Pitman, Tompkins, Miss Winslow, Kennedy, Godfrey, Channing, Mrs. Borden, Tucker.

On Country Schools—Lowe, Brownell, Taber, Bentley, Pothier, Tucker.

On Training School—Pitman, Kennedy, Milliken, Sayer, Channing, Brownell, Miss Winslow.

On Truants—Godfrey, Channing, Milliken, Pothier, Bentley.

On Mill Schools—Mrs. Borden, Howland, Lowe, Godfrey, Brownell, Bentley.

On Evening Schools—Kennedy, Lowe, Godfrey, Milliken, Channing, Tucker, Bentley.

On Music—Milliken, Godfrey, Shepherd, Brownell, Taber, Pothier.

On Manual Training—Sayer, Miss Winslow, Dunbar, Godfrey, Kennedy, Mrs. Borden, Tucker, Pothier.

On Examination of Teachers—Dunbar, Kennedy, Miss Winslow, Mrs. Borden, Pitman, Tucker, Brownell.

On Text-Books—Pitman, Kennedy, Milliken, Sayer, Brownell, Taber.

On Expenditures—Howland, Tompkins, Pitman, Lowe, Shepherd, Kennedy, Milliken, Taber, Hart.

On Howland Fund—Howland, Tompkins, Pitman, Dunbar, Kennedy, Shepherd, Taber, Hart.

On Rules—Pitman, Dunbar, Howland, Tompkins.

On Pay-Rolls—Tompkins, Howland, Taber.

SCHOOL BOARD, 1894.

STEPHEN A. BROWNELL, Mayor, Chairman, *ex-officio*.

ROBERT W. TABER, Vice-Chairman.

WILLIAM E. HATCH, Secretary and Superintendent.
Office, 133 William Street.
Office Hours, 8.30 to 9 A. M., 12.30 to 1 P. M. Saturdays, 9 to 9.30 A. M.

JOHN H. BARROWS, President of the Common Council, *ex-officio*.
Regular meetings of the Board, first Monday of each month at 7.30 P. M.

WARD ONE.

Name.	Place of Business.	Residence.
Louis Z. Normandin,	584 Purchase street,	586 Purchase street.
Anna R. Borden,		Ashland and Austin sts.
John H. Lowe,	925 Acushnet avenue,	931 Acushnet avenue.

WARD TWO.

Frank A. Milliken,	43 William street,	290 Pleasant street.
Edward T. Tucker,	285 Pleasant street,	285 Pleasant street.
Isaac B. Tompkins, Jr.,	78 Union street,	691 County street.

WARD THREE.

William H. Pitman,	Five Cents Savings Bank,	60 Chestnut street.
Stephen H. Shepherd,	Standard Office,	82 Maxfield street.
William R. Channing,	192 Union street,	91 Mill street.

WARD FOUR.

Seth W. Godfrey,		429 Union street.
George H. Batchelor,		187 Cottage street.
William E. Brownell,	271 Union street.	271 Union street.

WARD FIVE.

William L. Sayer,	Mercury Office,	76 South Sixth street.
Robert W. Taber,	Purchase and High sts.,	48 Fifth street.
Jonathan Howland, Jr.,		54 Russell street.

WARD SIX.

Francis M. Kennedy,	Eddy Building,	93 Washington street.
Joseph C. Pothier,	246 Fourth street,	246 Fourth street.
Betsey B. Winslow,		315 County street.

EMMA M. ALMY, Superintendent's Clerk.

HENRY SMITH, Truant Officer, 372 Cottage street.
Office Hours, 12.30 to 1 P. M.; Saturdays, 9 to 9.30 A. M.

GEORGE K. DAMMON, Messenger and Truant Officer, 137 Smith st.

STANDING COMMITTEES.

WILLIAM E. HATCH, Secretary.

The first named on each standing committee is Chairman of the same.

On High School—Pitman, Miss Winslow, Mrs. Borden, Tompkins, Shepherd, Sayer, Howland.

On Grammar Schools—Tompkins, Pitman, Howland, Lowe, Mrs. Borden, Sayer, Milliken, Channing.

On Primary Schools—Shepherd, Tompkins, Miss Winslow, Mrs. Borden, Kennedy, Godfrey, Channing, Tucker, Taber.

On Ungraded Schools—Lowe, Mrs. Borden, Howland, Brownell, Taber, Pothier, Godfrey, Tucker, Normandin.

On Training School—Milliken, Kennedy, Pitman, Sayer, Channing, Brownell, Miss Winslow, Pothier.

On Truants—Godfrey, Channing, Tucker, Pothier, Normandin.

On Evening Schools—Kennedy, Lowe, Godfrey, Channing, Tucker, Pothier, Normandin.

On Music—Mrs. Borden, Godfrey, Shepherd, Brownell, Taber, Pothier, Normandin.

On Manual Training—Sayer, Miss Winslow, Godfrey, Mrs. Borden, Tucker, Normandin, Kennedy.

On Examination of Teachers—Miss Winslow, Mrs. Borden, Tucker, Brownell, Milliken.

On Text-Books—Pitman, Kennedy, Milliken, Lowe, Sayer, Brownell, Pothier, Tucker.

On Expenditures—Howland, Tompkins, Pitman, Lowe, Shepherd, Kennedy, Milliken, Taber, Barrows.

On Howland Fund—Tompkins, Pitman, Shepherd, Kennedy, Taber, Howland, Barrows, Milliken.

On Rules—Taber, Milliken.

On Pay-Rolls—Tompkins, Howland, Taber.

ANNUAL REPORT

OF THE

SUPERINTENDENT OF SCHOOLS,

FOR THE YEAR 1893.

Report of the Superintendent.

To the School Committee:

Ladies and Gentlemen, — I hereby submit to you my sixth annual Report. It is the thirty-third of the series of Annual Reports of the Superintendent of Schools of the city. By a vote of your Board, this Report, together with that of the Secretary, is to constitute the Annual Report of the School Committee.

A retrospect of the work of the schools for the year just closed is in the main satisfactory; certain matters, however, connected with their administration, especially during the first part of the year, marred somewhat the harmony of affairs. But I am earnest in the belief that the atmosphere has been cleared and the schools placed on a healthier plane than they have been for some years. Some weaknesses have been remedied, and lines of work projected for several years past have been put into operation, which will increase the working power of the schools.

The principals are exercising a more efficient supervision than formerly, thereby insuring a nearer approach to unity in the work not only of their own schools, but of the whole system; and the teachers are striving more than ever to inculcate in their pupils the feeling that earnestness of purpose guided

by right motives is the cardinal principle of success, whether in the limited sphere of the school world or the greater world without.

Unfortunately the progress of the pupils in two schools has been seriously interfered with by the delay in furnishing the school department adequate accommodations; for this, however, the school authorities are in no wise responsible. It is to be hoped that such a condition of affairs will not occur again, and certainly it can be avoided by prompter action in the future on the part of the city government.

It is my intention in this Report to set forth more fully the lines of work followed out in the schools than I have done in preceding Reports, and I most respectfully invite your earnest attention and that of all our fellow citizens to the same.

ENROLLMENT AND ATTENDANCE OF PUPILS.

The gain in enrollment for the year just closed was large as shown below; but it was only two-thirds as much as that of the preceding year, which was somewhat abnormal.

Below is given a comparative statement of the enrollment and attendance of pupils in all the schools of the city, the data of the private and parochial schools being courteously furnished by the principals and teachers of those schools.

PUBLIC SCHOOLS.

	1893.	1892.	Gain.
Enrollment,	6,884	6,713	171
Average number belonging,	5,543	5,379	164
Average daily attendance,	4,986	4,822	164
Per cent. of attendance,	90	89.9	.1

PRIVATE AND PAROCHIAL SCHOOLS.

	1893.	1892.	Loss.
Enrollment,	2,922	3,248	326
Average number belonging,	2,694	2,821	127
Average daily attendance,	2,281	2,430	149
Per cent. of daily attendance,	85	86	.1

PUBLIC, PRIVATE AND PAROCHIAL SCHOOLS.

	1893.	1892.	
Enrollment,	9,806	9,961	Loss 155
Average number belonging,	8,237	8,200	Gain 37
Average daily attendance,	7,267	7,252	Gain 15
Per cent. of daily attendance,	88	88	

In my report last year I stated that I felt sure a mistake was made in the reports of some of the parochial schools in their enrollment. The reports this year confirm that opinion, as a disproportionate loss is shown in the enrollment as compared with the items of "average number belonging" and "average daily attendance." I have no way of testing the accuracy of the reports given me by the private and parochial schools, and estimate some of them as approximate only, but possessing value as showing the trend toward that form of education. Neither do I intend to intimate that any of these returns are given inaccurately for the purpose of making a good showing, for I am sure that such is not the case. I account for the apparent discrepancies in this way: that the system of keeping the records in some of these schools is not worked out so carefully as in the public schools; in the latter great care is exercised in revision of the reports to prevent errors, and yet they occur. All reports the past year, however, show that the parochial schools have lost in numbers, while the public schools have gained appreciably.

While it is to be greatly regretted that so many of our fellow citizens see fit to withdraw their children from the public schools for the purposes of education, it is a still greater source of regret that many of these schools are far below the public schools in their standards of education. Some of them do not answer the conditions of the State laws, even so far as their essential organization and instruction are concerned. I have directed the attention of your Committee to this condition of affairs before, and I feel that I should fail in my duty if I should let it go unnoticed in this Report.

TRUANCY.

The teachers report 218 cases of truancy for the year, as against 197 for the previous one. These figures do not show the actual number of different pupils who have been truants, as several cases may be chargeable to one individual. On the other hand, there are cases unquestionably that escape the knowledge of the teachers, careful as they are. With the increased size of the city and the establishment of parochial schools, the task of ferreting out truants is much greater than when the city was smaller and nearly all the pupils were enrolled in the public schools. The truant officers, however, are faithful and vigilant, and few guilty ones escape their attention.

Five commitments were made to the County Truant school at Walpole during the year, and there are at present nine truants in that school from New Bedford. I have not traced the career of the pupils who have been sent to the truant school after their release, but individual cases have come to my knowledge which show the good effect of the school. From personal observation I know the school to be well conducted, and a year or two spent there by the truants saves many of them from a career of criminality.

The reports of the truant officers are subjoined.

REPORT OF HENRY SMITH, TRUANT OFFICER.

Schools visited,	1,459
Absences reported by teachers,	763
Absences without permission of parents,	117
Second offences,	24
Third offences,	13
Parents notified,	819
Taken to school from street,	20
Arrests,	6
Prosecutions,	8
On probation,	1

Sentenced to Truant school,	5
Visits to mills,	47
Violations of labor law,	4

REPORT OF GEORGE K. DAMMON, TRUANT OFFICER.

Families visited,	18
Cases of absences investigated from evening schools,	717
Visits to mills and mercantile establishments in relation to labor law,	148
Violations of labor law,	24

The work of the truant officers is divided as follows: Mr. Smith gives his attention mainly to investigating cases of absence from the public day schools and the prosecution of truants. He also attends to cases of truancy that occur in the parochial schools when requested to do so. He occasionally visits the mills and mercantile establishments. Mr. Dammon gives but part of his time to the duties of truant officer. He investigates all cases of absence in the evening schools which call for investigation. He visits the mills and mercantile establishments frequently on matters relating to labor laws; the remainder of his time is given to the duties of messenger and janitor of the School Committee rooms, the duties of which in these days of free text-books and supplies are not light.

EMPLOYMENT CERTIFICATES.

In my Report last year I directed the attention of the School Board to the fact that there were a number of schools in the city that had not been approved by the Board, and that pupils from those schools applying for certificates to work were not entitled to them under the statutes of the State. Although a special committee was appointed by the Board to consider the matter no definite action has been taken, and your Superintendent is still embarrassed by existing conditions in issuing certificates. I hope this vexing question will receive the early attention of the Board.

The following statistics will give some idea of the demands made upon the Superintendent's office during the year in this one matter alone. But they fail to give a complete knowledge. Many certificates are refused, and the time required in examining the applications and explaining the reasons for refusal is not of slight moment.

Number of certificates issued,		644
For the first time,	627	
Duplicate certificates,	17	644
Birthplace of those to whom certificates were issued:		
United States,	221	
Canada,	194	
England,	103	
Western Islands,	70	
Germany,	14	
Ireland,	8	
Scotland,	4	
Russia,	3	
Austria,	3	
Sweden,	2	
Prince Edward's Island,	1	
France,	1	
Wales,	1	
Italy,	1	
Portugal,	1	627

244 parents could not sign their names.

THE COST OF SCHOOLS.

In speaking of the education of the people Daniel Webster said: "We regard it as a wise and liberal system of police, by which property, and life, and the peace of society are secured." Another has said: "It is not so much to the wisdom of Legislatures, or an enlightened social organization, as to skill in productive arts, that States in future must look for their supremacy. Education is the great instrument which determines this excellence."

In accordance with these ideas the public schools of this country have been developed, and within the last thirty years

the sum raised for their maintenance has increased several hundred fold. The questions that are now being frequently raised by tax-payers, namely: why the great proportional increase in the cost of maintaining the schools over that of thirty, or even twenty years ago? and the other, is not the support of the schools becoming a burden, which the results do not justify? are both answered in a large measure by the words of those whom I have quoted.

To answer more explicitly, however, the first of these questions, I would say that the increase in cost is caused by the changed condition of life, which throws greater responsibilities upon the schools. Whether the support of the schools is becoming a burden grievous to bear and unjustifiable is a more serious question, and one which is much more difficult to answer. I do not think so, but I am not supposed to be an unbiased judge. Neither do I think that any candid and thoughtful person will upon reflection come to an adverse conclusion, certainly not if he accepts the statement which would be hard to refute, that the supremacy of States in the future will depend upon the skill of the citizens in the productive arts, and that education gives this skill. Indeed, it is a well accepted principle of political economy that intelligent labor is the great wealth producing force of a country. The schools are engaged in the production of such labor, and surely the source of wealth should reap the benefits of the wealth it produces. Massachusetts, the most liberal of states in her school expenditures, is one of the wealthiest in spite of her natural disadvantages, avowedly due to the intelligence of her citizens.

If it is granted, however, that large expenditures are justified for the schools, it is none the less true that there may be waste in administering the fund appropriated for their support by the division of too much of it into the least important channels. Those who furnish the money through taxation are justified in scrutinizing most carefully the expenditures of those

taxes, and have a right to demand that the money expended shall be used in a manner that will give the best results. Too often there are extravagant expenditures for the material side of the schools, which result in the dwarfing of the educative, the important side. Expensive school houses are erected when less costly buildings would provide as well for the health and comfort of the pupils and at the same time not offend good taste. In this way a debt is created which is liable to react to the injury of the schools. It is far better, provided a city can make lavish expenditures, to surround the school houses of less expensive kind, with extensive play-grounds and play-sheds for the pupils in inclement weather, than to erect costly buildings on unsuitable and small lots, which in their structure gratify the pride of the architect, rather than subserve the best interests of the schools. Imposing and ornate school houses, costly furniture and fixtures are all well enough if a city can afford them, but few cities can.

The highest interests of the schools are subserved when school houses are provided which are located in pleasant and healthful localities, surrounded by sufficient grounds to admit of an abundance of sunlight and air; school houses that are well heated and ventilated, and furnished primarily for the physical well-being of the pupils and teachers; where there is such supervision as will ensure well planned courses of study and wise methods in applying them; but more important than all, when they are equipped with good teachers, educated and trained to do that highest and noblest work, the unfolding and developing the minds and characters of the young.

Unfortunately for the schools when retrenchment is necessary, the first thing that is usually thought of is the reduction of the teachers' salaries. Instead of being the first, it should be the last means of reduction. Low salaries can now command only inefficient teachers and teaching; of what use, may I ask, are all the expensive school houses and appliances if the teaching is to be of inferior quality? It would be well if the science

of *school economy* was better understood, not only by the public at large, but by those who are called upon to administer schools.

To narrow the subject to our own system of schools, and to inquire whether the schools of New Bedford are costing more than they should—as some of our citizens appear to believe—I invite attention first to a few facts and figures taken from the Report of the State Board of Education for 1891-2, (at the time of writing this the Report for 1892-3 was not published) regarding (1) the amount appropriated by the different cities and towns for school purposes for each child between the ages of five and fifteen years residing within their limits; and (2) the percentage of taxable property appropriated for school purposes in the different cities and towns of the State.

In the first list New Bedford ranks 161, of the 351 cities and towns in the State. The year before her rank was 98, having fallen 63 in the list in one year. As compared with the cities of the State the following cities appropriate more: Newton, Medford, Waltham, Somerville, Springfield, Cambridge, Boston, Malden, Lynn, Taunton, Worcester, Gloucester, Salem, Chelsea, Lowell, Brockton, Northampton, Haverhill, Marlborough, Quincy, Everett, Fitchburg, 22, and but seven cities less.

In the second list, as to the percentage of taxable property appropriated to the support of the schools, New Bedford ranks 285 of the 351 cities and towns in the State. The year before her rank was 284, having fallen one in the list in one year. Expressed in mills and hundredths of mills her appropriation was 2.70 mills on her valuation. The following cities appropriated more: Marlborough, Gloucester, Woburn, Pittsfield, Taunton, Quincy, Medford, Brockton, Northampton, Malden, Somerville, Waltham, Chelsea, Fitchburg, Holyoke, Everett, Haverhill, Salem, Cambridge, Worcester, Newton, Lowell, Fall River, Lynn, Chicopee, Lawrence, Springfield, 27, and but two cities less.

Although it is not to be inferred from the above that New Bedford is parsimonious in her appropriations for schools, it must be sufficient evidence to any fair minded person, that as compared with her sister cities in this fair Commonwealth, she is furnishing a far smaller proportional part of the money raised by taxation than the great majority for the education of her youth. In addition it may be said that she is expending less per pupil on those who attend the schools than a number of cities of proportionate wealth in the State. In the light of what has been shown the financial stringency in city affairs can scarcely be attributed to the expenditures for schools.

This city cannot afford to reduce her appropriations for the schools. The salaries now paid are but the average paid in cities where the expense of living is the same; as many pupils are now apportioned to a teacher as is conducive to the health and advancement of the pupils; no more books, supplies, and apparatus are now furnished the schools, even with the aid of the Sylvia Ann Howland fund, than the schools require for good work; only such additions to the school buildings, and repairs upon the same are made as are required to accommodate the increased number of pupils and keep the buildings in proper order. If these statements are true, and I believe they will bear the closest investigation, how can the expenditures for schools be reduced without striking at their very life? New Bedford can no more afford to belittle her public school system than she can afford to decry her great and growing industries, both of which contribute their due measure to her fair name and prosperity. Any appreciable reduction in the school appropriation will result in a loss of many of our best teachers, for the demand for trained and experienced teachers is far greater than the supply; a large reduction will result not only in retarding the progress of the schools, but in a disorganization of the system which has been so carefully built up by much thought and labor.

It remains only to be said that the cost per pupil in our schools for the year 1893 was substantially less than for 1892, brought about by a careful adjustment of pupils to each teacher. This result was secured, too, in face of the fact that a cooking school was added and in operation the last sixteen weeks of the year, and several salaries were increased in order to retain several teachers, whose services are valuable to the city, and who were persistently sought for by a neighboring city.

TEACHERS.

Good teachers make good schools; nothing else can. And it means much to be a good teacher. A teacher may be a failure though he posess a broad education; he may be a failure with professional training added to his knowledge. The power to control and the ability to stimulate and draw forth the best that is in others are important requisites for the teacher. To crown all these he must have a genuine interest in his work and in those whom he is to instruct, if his influence is to be strong and lasting.

One of the most weakening and positively harmful elements in any system of schools is the presence in it of teachers who are not thoroughly in earnest. It is not necessary that one who enters the teaching profession should have done so from choice to bring to it the right spirit. But it is necessary that he should possess a character of such mould that he will strive to do his duty at all times and find a pleasure in so doing, not a time-server who is satisfied with any kind of work that he thinks will be accepted. Teaching is not an easy task in these days, nor is it a very remunerative one; but it is an honorable and most responsible one. It certainly is not the sphere for those whose interest in their work does not extend beyond the school room door, or for those who consider their duty done when they follow in a routine method the daily programme. Teachers who are to be successful in the best meaning of the term must have

noble ideals; they deal with souls as well as intellects and their own standards are reflected in their pupils.

It gives me pleasure to testify to the high intelligence of the corps of teachers in the city as a body, and the earnest purpose that actuates most of them. There are a few, however, who have not laid a good foundation for their calling, and I fear do not give the time to study and preparation necessary to keep in touch with modern thought, or to make their teaching at all broad. There are a few also who feel that their lot is a hard one; who are inclined to promulgate the idea that their lives are made a burden by their occupation.

I am free to admit that their calling has its peculiar trials; and for those who dislike work, or who cannot control themselves or others, it is productive of unrest and worry, and is exhausting. Notwithstanding the wear and tear of the life, however, statistics show that teachers are as long lived as those of any profession. Those who are fitted by nature and preparation for the profession have but little cause for complaint. Those who are constantly complaining are usually inefficient, and should seek some more congenial occupation. They have no right to inflict themselves and their inefficieney on the suffering children. Some teachers appear to forget that more time is given for rest and recreation in their business than in almost any other. With 200 school days as the maximum for work there remains 169 for recreation and recuperation. There are few other countries which rank high in educational matters, where less preparation is required of teachers for their profession, or whose school hours are not longer.

Several important changes have occurred in the corps during the past year. Mr. Ray Greene Huling, the successful principal of the High school for some years, resigned to accept the principalship of the English High school, Cambridge, Mass. Mr. C. E. E. Mosher, for many years at the head of the Parker Street Grammar school, in which position he achieved success,

withdrew to engage in private school work. Mr. Huling was succeeded by Mr. Charles Sturtevant Moore, a graduate of Harvard College, and Mr. Mosher by Mr. Frank J. Heavens, a graduate of Amherst. Both gentlemen came to us with the prestige of flattering success, and have entered upon their duties in a manner that is full of promise for the best results.

All the appointments, resignations, and transfers for the year are noted below:

APPOINTMENTS.

Charles Sturtevant Moore,	Principal, High school.
Francis J. Heavens,	Principal, Parker Street Grammar school.
Helen McCoy,	Cedar Grove Street Primary school.
Isabella F. Winslow,	Parker Street Grammar school.
Lizzie M. Briggs,	I. W. Benjamin Primary school.
Carrie E. Footman,	Principal, S. A. Howland Primary school.
Julia A. Hunt,	I. W. Benjamin Primary school.
Emma L. Gartland,	I. W. Benjamin Primary school.
Caroline E. Bonney,	Cedar Grove Street Primary school.
Alice A. Richardson,	Cedar Grove Street Grammar school.
Mary E. McAuliffe,	Clark's Point school.
Lillian T. Thomas,	Rockdale school.
Julia W. Corish,	Training school.
Florence A. Poole,	Training school.
Grace Greenwood,	Cooking teacher.
Kate Moore,	Training school.
Grace W. Russell,	Training school.

RESIGNATIONS.

Ray Greene Huling,	Principal, High school.
Mary R. Hinckley,	Middle Street Grammar school.
Charles E. E. Mosher,	Principal, Parker Street Grammar school.
Mary W. Leymunion,	Cedar Grove Street Grammar school.
Eleanor Commerford,	Principal, William Street Primary school.
Susan W. Lucas,	Acushnet Avenue Primary school.
Rachel L. Denham,	I. W. Benjamin school.
Agnes E. Braley,	North school.
Amelia F. Keene,	Rockdale school.

ABSENT ON LEAVE.

Agnes J. Dunlap,	Middle Street Grammar school.
Nancy H. Brooks,	Fifth Street Grammar school.
May L. Pettey,	Parker Street Grammar school.
Sara M. Hatch,	Cedar Grove Street Primary school.

TRANSFERS.

Helen Ring.	from Parker Street to Middle Street.
Mary W. Leymunion,	from Parker Street to Cedar Grove Street.
Lizzie E. Omey,	from Parker Street to Cedar Grove Street.
Elizabeth Bennett,	from Thompson Street to Acushnet Ave.
Charlotte M. Allen,	from Thompson Street to I. W. Benjamin.
Lizzie M. Briggs,	from I. W. Benjamin to Thompson Street.
Annie L. Brownell,	from I. W. Benjamin to Thompson Street.
Helen J. Kirk,	from I. W. Benjamin to William Street.
Sarah E. Kirwin,	from Acushnet Avenue to I. W. Benjamin.
Annie M. King,	from Harrington to Acushnet Avenue.
Mary C. Barstow,	from I. W. Benjamin to Dartmouth Street.
Kate Sweet,	from North Mill to Cedar Grove Street.
Emma L. Gartland,	from Clark's Point to I. W. Benjamin.
Dora A. DeWolf,	from Harrington to I. W. Benjamin.
Ruth E. Pease,	from Harrington to Cedar Grove Street.

TEMPORARY ASSISTANTS.

Agnes E. Braley,	North school.
Alice P. Terry,	Rockdale school.

THE HARRINGTON TRAINING SCHOOL FOR TEACHERS.

This school was organized and went into operation in September, 1889. Since that time 50 teachers have graduated from the school, and have been appointed to the regular teaching corps of the city. Forty-three of them are now in service. None of those who have resigned after appointment to the regular corps have been requested to do so for inefficiency. This record is surely an excellent one. Although not all of the graduates are achieving the highest success, the majority of them are quite efficient, and the value of the training obtained in the school is apparent in every case. Had this school not been founded it would have been necessary to fill

the majority of positions held by them with non-resident teachers, or to appoint to those places persons without any training whatsoever for teaching. The latter course would have been fatal to the progress of the schools.

During the year both the principal and vice-principal were offered larger salaries to take charge of a similar school organized in a neighboring city. In order to retain their services the School Board raised their salaries. This action in the interest of good schools should meet with the commendation of our citizens.

There remains but little to be added to what has been stated in previous Reports. The work of the school continues very satisfactory, both in its Normal Department and its regular school work. If those who enter the school as pupil-teachers brought with them more of the spirit that should actuate those who choose teaching for their profession, the influence of the school would be broadened, and its work made still more effective. There exists at times just cause for criticism in the mental attitude assumed toward the work by some of those who enter the school.

COURSE OF STUDY, HARRINGTON TRAINING SCHOOL.

SUB-JUNIOR CLASS.

Name of Study.	Time Given.	Text-Book Used.
Psychology, Pedagogy,	30 hours.	White's Elements of Pedagogy.
History of Pedagogy,	30 hours.	Compayre.
School Laws of Massachusetts.	10 hours.	
School Management,	10 hours.	
Arithmetic,	60 hours.	
Geography,	60 hours.	
Reading,	48 hours.	
Language,	53 hours.	
Writing,	15 hours.	
Nature Study,	15 hours.	
Physiology,	5 hours.	
Music,	20 hours.	
Drawing,	20 hours.	

During the Junior and Senior terms the pupil-teachers recite four hours a week, if these classes are full enough to allow the withdrawal of the teachers from the rooms during the recitation period.

In these recitations the pupil-teachers give teaching exercises, usually to classes of children, who are dismissed at the close of the exercise. Then follow criticisms, discussion, and suggestions concerning the teacher's methods of teaching and controlling the class. Often teachers bring up for discussion or counsel points that have troubled them in the class room.

STATISTICS FOR THE YEAR 1893.

Number of pupil-teachers enrolled during the year,	29
Number of pupil-teachers graduated in February,	2
Number of pupil-teachers graduated in June,	8
Number of pupil-teachers admitted in February,	1
Number of pupil-teachers admitted in September,	10
Number of pupil-teachers resigned,	4
Average number of pupil-teachers belonging,	13
Number of assistant teachers,	5
Number of days substituting by pupil-teachers,	215½
Number of days other absence of pupil-teachers,	122½

GRADUATES.

FEBRUARY, 1893.

Emma Louise Gartland.
Caroline Elizabeth Bonney.

JUNE, 1893.

Julia Winifred Corish.
Julia Arnold Hunt.
Kate Moore.
Florence Ashley Poole.
Alice Anne Richardson.
Grace Worthing Russell.
Lillian Turner Thomas.
Ruth May Tripp.

GENERAL STATISTICS.

Whole number of pupil-teachers enrolled since the establishment of the Training school,	75
Number of pupil-teachers in the school, January, 1894,	11
Number of pupil-teachers graduated from the school,	50

Number of pupil-teachers who have resigned on account of unsatisfactory work,	8
Number of pupil-teachers who have resigned for other causes,	6
Number of graduates now teaching in New Bedford,	43
Number of graduates who have married,	4
Number resigned to study for special higher work,	2

THE CURRICULUM.

That public opinion is undergoing a change in regard to the course of instruction that should be given to pupils of the elementary schools is noticeable to even the most casual observer. The three R's while still holding sway to a greater or less degree, have long since been supplemented in school courses by grammar, geography, history, music, and drawing. More recently, other branches have found recognition in many schools—as natural history, physiology, elementary physics, and the manual arts in the form of sewing, cooking, and wood and metal working. While in the past, language teaching in these schools has been confined to the vernacular, and the mathematical instruction to that furnished by arithmetic, it is now urged strongly by many of the most prominent educators that Latin and one modern language at least should be made elective in the last years of the grammar course; also that inventional geometry and algebra should supplement the work in arithmetic at least during the last year of the grammar schools. Others desire the introduction of such branches as will meet their own peculiar ideas; those enumerated are, however, the principal ones that have so far been accepted, or are deemed most worthy of consideration by school authorities.

It is unquestionably true that some of the so-called essentials, as arithmetic, grammar, and geography have been given undue prominence in the past in the educational scheme, and have been overrated as to their educative and disciplinary value. When we consider the barrenness of the results that

have been produced by years of instruction in these branches in the schools, it is difficult to argue against their abridgment for the purpose of introducing other branches that will serve better for purposes of mental training, and a knowledge of which will also be of greater practical value.

But this broadening of the curriculum means more than simply placing other branches in the course. It means a complete revolution in the organization and administration of the school system. Departmental and special instruction must hereafter supersede to a large extent the custom that has hitherto prevailed of one teacher conducting all the various branches with a class. With the three R's as the extent of the teaching, the old method was feasible. When a few other branches were added, the teaching became less sound; when music and drawing were added, specialization in instruction became a necessity; with the introduction of sewing, cooking, wood and metal working, and physical training, special teachers for each were added. The departmental system is fairly under way, and if it is not to become too expensive and burdensome, the regular corps of teachers must be broken up into departmental groups also, that efficiency of teaching at the least cost may be secured.

The departmental method of teaching has already been advocated for the grammar schools of Boston by the Board of Supervisors, and will in all probability be tried there. This system will have its disadvantages, but the system is a necessity with the diversity of studies that are even now engrafted upon the course of study in those schools that are considered the best. The teachers of the present are certainly not prepared to teach with any hope of reasonable success the multiplicity of branches which now form a part of a modern curriculum. Nor is it reasonable to expect that any body of teachers can be educated and trained to teach them all well. In the industrial arts, in the liberal professions, and in the

teaching force of the secondary schools and colleges, specialization of work has become an accepted fact; it will soon pervade the elementary schools per force.

While the School Department of New Bedford has not been extremely radical in adopting innovations in the school curriculum, neither has it been so conservative that it has remained indifferent to the changes that modern thought has wrought in the teaching in the schools. Music and drawing have been a part of the school course here for many years; sewing long since became a part of the curriculum; nature study and cooking have recently become a part of the regular instruction, while the manual training school but awaits an instructor to be placed in operation. My worthy predecessor was a pioneer in eliminating much of the extraneous matter from the instruction in arithmetic, geography, and English grammar. Observational geometry and some inventional have long formed a part of the regular instruction in the primary and grammar grades. While nothing as yet has been attempted in the elementary schools in demonstrative geometry or algebra, and no attempt been made to incorporate the teaching of Latin or a modern language upon the grammar course, those places are being watched with interest in which this has been done with the intention of profiting by their experience if the movement is successful.

I shall attempt to outline somewhat briefly the line of instruction which is now being followed, especially in our elementary schools, that it may be better understood by those who are interested, and that it may invoke such friendly criticism as will tend to remedy its weaknesses.

LANGUAGE.

Under the head of language is included composition, grammar, reading, and spelling, although much of the direct language instruction is given in connection with the nature study, geography, and history.

Composition and Grammar—The aim from the beginning is to create ideas in the pupils' minds, and to guide them in expressing these ideas in proper form. At first, objects and pictures are placed before the pupils. They are led to observe these objects and to give to the teachers the results of their observations. By skillful questioning on the part of the teachers, and suggestions, they are aided in their observations and led to proper forms of expression. Oral expression is followed by the written forms as soon as the pupils are able to write. When their ages permit, their observations of things outside the school room and the life that surrounds them are made the basis of much of the work. Stories are told by the teachers and reproduced orally and in written form by the pupils. Reproductions are also made by the pupils of their reading lessons, and lessons in natural history, geography, etc. They are introduced to the mechanical forms of expression, such as the marks of punctuation and capitalization, as well as to the arbitrary forms of grammatical expression: (1) by copying correct forms placed on the blackboards or slips of paper; (2) as they advance in grade, by the study of correct forms in language books. The study of technical grammar begins with the seventh year of school. The work of this year in grammar is confined to distinguishing the forms of the parts of speech, a recognition of sentences in their four forms, the relation of subject and predicate in the sentence, and the inspection of the two principal forms of modifiers—adjective and adverbial. During the next two years sentences distinguished as simple, complex, and compound are considered, the properties of the parts of speech are studied, also the relations of the various parts of speech in the sentence. The analysis of sentences in their simple forms receive some attention, and the application of the ordinary principles and rules of syntax are taught. Throughout all grades, composition work in varied forms, graded to the capacity of the pupils, is

systematically carried on, and the memorizing of choice selections of prose and poetry. Letter writing and conventional forms of written intercourse receive their proper share of attention. In brief, the teachers strive throughout the course in the elementary schools, (1) to teach the pupils to observe for themselves and to give expression to their observations; (2) to exercise their imaginative powers; (3) to strengthen their memory and to train their reason and judgment. This work in language and grammar in the lower schools is supplemented by a four years course in English in the High school, required of every pupil, while the courses in the classics and modern languages there broaden still further the language study of the schools.

Reading—This, one of the three R's, is as important a branch of study today as in the days of our forefathers, and must remain so until the end. But modern ideas as to the methods of teaching it have changed greatly. The wonder is that the old ideas should have prevailed so long, and the fact that they did remain unchanged so long is a sad commentary on the teaching of the past. At first objects with which young children are more or less familiar are brought to their attention, and the teacher calls to her aid toys and pictures. The teacher presents the objects to the pupils; the name is given by some pupil, or by the teacher, if no one in the class can do so, and the word is written upon the board. The pupils are taught that this written symbol represents the object. They are questioned, it may be, upon the color of the object presented, or its form, or what it can do, or what can be done with it, and their answers are written upon the board; for the pupils are introduced at once to the sentence, the unit of thought. In a short while they acquire quite an extended vocabulary which they read at sight, varying from 150 to 300 words in the first five months, according to the skill of the teacher and amount of time given daily. Both the script and printed forms are used upon the board by the teachers, usually

the script form as admitting of more rapid work. The transition to the printed forms is made by the aid of charts at the end of the first four months. Reading books are soon placed in the hands of the pupils and the easier pieces of several first readers are read by them at the close of the first year at school. At the end of the third year at school, the pupils are able to read understandingly and with a fair degree of expression composition embracing quite a wide range of ordinary words. While the importance of good oral rendering is recognized, it is constantly emphasized that the chief aim of the teachers should be to have the pupils comprehend the subject matter read. Silent reading is done by the pupils as well as reading aloud, and tests of progress are made by requiring them frequently to render at sight something which they have not read before.

But the change in the methods of teaching reading is no greater than the change in the kind of reading matter that is used. The regular reading books, so called, have been superseded to a great extent by a line of books which answer more fully the purposes of the instruction in this branch. The reading books of the old type have been supplanted to a large extent by more suitable ones. Recognizing that the pupils should read such matter as will give them useful information, or will create in them a good literary taste, books are being gradually selected and placed in the grammar and primary grades for these purposes. The selection of books is made in relation to four general lines: (1) those relating to natural history; (2) those relating to geography: (3) those relating to United States history: (4) those of literary merit. In the primary grades, in addition to a variety of regular readers, are placed these books: Wood's Natural History Readers, Geography for Young Folks, Robinson Crusoe in One Syllable, Seven Little Sisters, Each and All, King's Picturesque Geography, Hans Andersen's Fairy Tales adapted to Third Reader grade, Seaside and Wayside No. 1.

In the grammar grades, in addition to the regular readers, are the following: In the lowest grade, fifth year—The Health Primer, Our World No. 1, Seaside and Wayside No. 2, Child's Book of Nature. In the sixth year—Scribner's Geographical Reader, Eggleston's Smaller U. S. History, Seaside and Wayside No. 3. In the seventh year—Higginson's U. S. History, Hawthorne's Grandfather's Chair, Kingsley's Water Babies. In the eighth year—Ballou's Footprints of Travel, Hawthorne's Tanglewood Tales, Whittier's Snow Bound. In the ninth year—Lamb's Tales from Shakespeare, Longfellow Leaflets, Quentin Durward, McKenzie's America, Seven British Classics.

To broaden still further the list, books in sets of three have been provided for sight reading, as follows: Washington Irving's Sketch Book, Lincoln's Gettysburg, Hans Brinker, Black Beauty, Little Men, Blue Jackets of 1776, Blue Jackets of 1812, Blue Jackets of 1861, King of the Golden River, Church's Old World Stories, Little Flower People, Little Lord Fauntleroy, Heroic Ballads, At the Back of the North Wind, Stories of Industry, World at Home—Europe, World at Home—The World, Peasant and Prince, Prince and Pauper, Arabian Nights, Vicar of Wakefield.

By furnishing books in sets of three, one for the teacher, one for the pupil reading, and the other for the pupil next in turn, a great variety of good reading matter is secured at a minimum cost. While the list of reading books is not the best perhaps that could now be selected, it has grown through the years, and is in the main good. It certainly is accomplishing that which was not possible with the old line of readers.

Spelling—Spelling is taught chiefly by requiring words to be written from dictation. The association of the correct pronunciation of each word with its written form is taught of course. But as the use of words in after life, so far as it relates to their spelling is mainly in their written form, children should become so familiar with writing the ordinary vocabulary of life that they will write it correctly without reflection.

While spelling books are in use in the schools, spelling is taught to a large extent through the written language work done in connection with all the branches, it being necessary for the pupils to possess a vocabulary of considerable range to express themselves intelligibly on the many subjects now taught.

MATHEMATICS.

Arithmetic is the main source of mathematical study below the High school. It is true that something is done with geometry in connection with form study and drawing and with the treatment of mensuration in arithmetic, but the work in this subject is incidental and not sufficiently definite. Algebra has not yet found lodgment in the course. A development of the work along the lines of concrete geometry and elementary algebra, with still greater restrictions placed on the amount of arithmetic, would strengthen the course both for pupils who complete their education in the grammar schools and those who continue their studies in the High school.

Arithmetic—Some years ago, much of the subject matter embraced in the ordinary grammar school arithmetic was eliminated from the work of the elementary schools and relegated to the High school. There this subject is taught one period a week for the four years. The results that accrue from the study of this subject, pursued as it is for a number of years by nearly all pupils in the schools throughout the country, have been so unsatisfactory that serious reflection has been cast in these later days upon the estimation hitherto placed upon it as a useful and disciplinary study. That it will occupy a position of much less importance in school courses than it has in the past is unquestionably true.

The course in the schools is substantially as follows: In the first four years numbers are developed from 1 to 144 by the four-process method and objectively. Perception of the simple fractional forms is taught from the beginning with their

use as the work progresses. Units of United States money, of liquid measure, dry measure, avoirdupois weight, and time measure, with their relations, are presented. In applied number, actual measures are used when possible. Numbers containing integers of two periods and decimals of three orders are written and read. In the work in multiplication and division the multiples or divisors are integers of either one or two figures, not larger. Roman numerals from 1 to 200 are taught, also the symbols for 500 and 1000. No text-books are placed in the hands of the pupils until the fifth year, or lowest grammar grade. I feel, however, that the pupils could use a text-book to advantage during the fourth year, perhaps during the third year, and much valuable time which is now consumed in the preparation of class work, gained for other purposes.

In the grammar grades an elementary arithmetic is used the first two years, followed by a more advanced one in the succeeding three. In the grammar course the lines of work begun in primary grades are continued, with new subjects added each year. Short daily oral drills with small numbers are continued throughout the course. All work is made as objective as possible. The following subjects given in most of the grammar school arithmetics have been eliminated from the course, and taken, if taken at all in the schools, in the High school by those who continue their course there: The memorizing of rules and abstract principles as given in text-books; nearly all that is contained under the heading, "Properties of Numbers"; the more difficult problems in common fractions; circulating decimals; the Metric system; addition, subtraction, multiplication, and division of compound numbers; Metric equivalents; exact interest and problems in interest, so-called; partial payments; compound interest; equation of payments; compound proportion; cube root, except by inspection; all under the head of mensuration except as applied to the measurement of surfaces, as land, lumber, flooring, and plastering, and

finding the area of quadrilaterals, triangles, and circles; progression; alligation.

While much has been eliminated as shown, I have no doubt but the course could be cut down still more, and the time of the pupils who are to leave school at the end of the grammar school course be more profitably given to other studies.

In the High school this subject, as stated before, is taken once a week by the pupils for the four years. Judging from the results obtained from its study there, I am inclined to believe that this continuous course is not beneficial. The pupils tire of the study. If it were dropped from the course for the first two years and taken up again in the third year afresh, after the pupils had taken algebra and demonstrative geometry, they would undertake its study with a new relish and a fuller comprehension.

GEOGRAPHY.

The instruction in geography may be made broad and exceedingly interesting to pupils; but too frequently it degenerates into a memorizing of facts, many of which are unimportant, and which fade from the minds of the learners without adding anything to their mental strength or giving them any idea of the true scope and usefulness of the study. It is too apt to become a study of words and sentences rather than a study of nature and a logical deduction of cause and effect.

A few years ago the study of the subject in our schools began in the fifth year with the reading of an elementary textbook. If anything was attempted in the primary grades by any of the teachers in this work, the methods used were as often as apt to be bad as good, and no well-ordered plan of teaching it pervaded the different grades. This has all been changed, and, while it is doubtless true that room for improvement still exists, there is now a defined plan of work in the study extending from the lowest primary grade through the grammar schools.

The experience of the best teachers has demonstrated that the teaching of this subject in the primary grades is best done with oral lessons. The teachers should call to their aid natural forms and the moulding board, and the children learn to regard the study of geography as a concrete branch of knowledge, and not an abstract one.

The present course has been arranged with the above ideas in view, and the text-book study is preceded by a series of well-defined oral lessons.

Throughout the course, both in the study of the subject that precedes the use of the text-book, and that which follows after the text-books are in the pupils' hands, the work is made as concrete as possible by moulding boards, globes, maps, both with flat and raised surfaces, solar cameras, and the presence in the school room of the actual products of the various countries; geographical readers and books of travel are read in connection, and reference books of various kinds are at the service of the pupils.

OUTLINE COURSE OF STUDY—PRIMARY SCHOOLS.

Natural objects: their form, color, material, use, etc.; their relations of place, direction and distance; the use of words to indicate place, and those that are used in description. Conversation lessons on topics like the following: (a) Day, night, heat, cold, winds, clouds, rain, snow, etc.; (b) on animals and plants that have their home (1) on land, (2) in the water; plans of the school room, school grounds, and outline map of New Bedford drawn by the pupils, studied in relation to form and special features; simple measurements; the points of the compass, also the names of the seasons, with the months comprised in them, and certain natural phenomena incident to each season; observations on the weather, and recording the same: evaporation and condensation shown by experiment, and application of the same to the formation of

clouds, rain and snow; the forms of land and water taught from the real earth itself when possible, otherwise from representations by pictures and moulding board; the earth studied as a great ball moving in space, lighted by the sun and surrounded by air, having daily and yearly motions, each of which produces its special effect; also its surface as divided into zones or belts. Special study is made of local geography; the typical forms of land and water; characteristics of surface, drainage, soil, and mineral products; something of local history and the occupations of the people. Both geographical and science readers are read in connection to help fix the conceptions gained by the pupils in their oral lessons and to develop new trains of thought concerning the subjects taught.

THE GRAMMAR COURSE.

This course begins with the fifth year of school life and a text-book used. The same underlying principles of instruction are followed, however, as in the primary grades, and is a continuation of that course in a broader form. The following is the course as laid down:

OUTLINE COURSE OF STUDY—GRAMMAR GRADES.

Fifth Year.

1. (a) Review briefly the work of preceding years. (b) Continent of North America. Plan for study of a continent:

1. Position.
2. Shape.
3. Size.
4. Boundaries.
5. Outline: Seas, gulfs, bays, etc.; capes, islands.
6. Surface: Mountains, valleys, plains, plateaus, deserts, slopes.
7. Rivers: Source, direction, mouth, uses, for what noted.
8. Lakes: Fresh or salt, outlet, facts of special interest.
9. Climate: Zones, length of day, elevation, slope, winds, currents.

10. Productions: Animals and plants peculiar to continent; animal, plant, and mineral productions and exports.
11. Countries: Capitals, a few leading cities, for what noted, people, character, language, religion, history.
12. Railroads, steamship lines.

2. Study with reference to position, boundaries, relief, drainage, climate, animal, vegetable and mineral productions, the following countries: The United States, British America, Mexico, Central America, West Indies, South America, (compare South America with North America).

3. A few important cities of each of these countries studied and compared.

4. Mathematical geography as in the fourth year. Imaginary journeys taken to such points as are of special interest. Principal water or railroad routes to be followed. Sketch maps. Write about subjects and places studied. Illustrate with pictures, relief maps, etc. Read geographical readers and other pertinent books. Text-book for reference and reading.

Sixth Year.

1. Europe, Asia, Africa, Australia, and the important Continental islands. Study briefly each grand division as a whole, in reference to position, reliefs, drainage, vegetable, mineral and animal productions. A few important countries of each grand division noted, with well-known cities, (if possessing any), and such comparisons made with other countries or cities as the teacher may find helpful. (See plan for study of continent). Imaginary journeys. (See fifth year).

2. Sketch maps. Write upon subjects and places studied. Read from suitable books.

3. Mathematical geography begun. Text-book for reference and study of topics as assigned.

Seventh Year.

1. The United States as a whole in brief review. Its position; boundaries; characteristics; physical features; contiguous ocean currents; the States and Territories composing it, with number of each and names; the cities and other places of greatest importance, commercially, historically, etc.; general form of government and chief pursuits of the people.

2. Study the States by groups. New England States, with critical study of Massachusetts. Middle Atlantic States. The Southern States. The East Central States. The West Central States. The Pacific States and Territories.

Plan for study of a group:

(a) The names of States forming group.
(b) Its general and relative position.
(c) Its marked physical features.
(d) Its climate.
(e) Principal productions and occupations of people; show cause and relation.
(f) A few of its most important cities. The line in which they are important and the causes that have contributed to make them important.
(g) Important historical associations, if any.

3. If time permit, brief review by topics of British America, Mexico, West Indies, and South America.

4. Mathematical geography continued as reviews.

5. Sketch maps, and write throughout year upon subjects studied. Read pertinent reading matter.

6. Text-book for reference and study.

Eighth Year.

1. Europe: Studied as a whole and by representative sections. Topical study as indicated in previous years.

Europe stands in the closest relation to our own country in many ways, and therefore should be studied more closely than

any other foreign division. Owing to its great importance, and its historical associations, its arts and its literature, the reading in connection with the study of this grand division should be broad, and the written work of the pupils in connection with the study should be extensive.

2. Asia, Africa, Australia, and the Continental islands studied as broadly as time permits.

3. Mathematical geography continued as reviews.

4. Sketch maps, read, write.

5. Text-book for reference and study.

Ninth Year.

1. Topical reviews once a week on the following subjects:

1. Mathematical geography.
2. Physical geography of the earth as a whole and by continents; characteristic features; incidental features; products as related to physical regions; ocean currents, their uses, etc.
3. Political and social geography. Great nations of the world, principal forms of government; great industries and their relation to natural and other conditions; lines of travel and commerce; the influence of nations and their social and religious conditions.
4. Read and write.

HISTORY.

The most eminent teachers of history are agreed as to the methods to be pursued in preparing children for the formal study of the subject. The first thing needful is to quicken their imaginations and to store their memories with incidents and associations. In speaking of the order of lessons Dr. Deisterweg says: "The first step would offer tales and legends; then tales of adventure, which is the first introduction into practical life and a help in comprehending the most elementary civilization, which is not yet included in the records of history, and is nevertheless demanded for the comprehension of his-

torical work. The first step is concluded by biographies—which pretend to be only biographies—with a certain poetical coloring. They find their elementary limitations and importance in that they, aside from single features, clearly and minutely depict the summit of ideal activity, thereby early making the pupil familiar with ancient as well as modern heroes, and, at the same time, affording a cursory view into the centres of the manifold labor of civilization, public as well as private." It does not seem necessary that there should be a definite plan or order in the acquisition of these stories, great names, and important events, but that the children should at an early age become acquainted with them.

It is also agreed by these eminent authorities that children should begin the formal study of the subject with the history of their own country. What the order should be after that is not so well agreed upon by them. One prominent professor of history in this country says: "When we pass to the next stage, and ask what branch of history should follow (in American schools) that of the United States, the answers would be various. The usual practice is to take up General History at this point; but I think the practice is not a wise one." And he goes on to give very cogent reasons to show why the order is not a good one. I am inclined to agree with him in this opinion, and as General History follows in the High school the study of United States History in the grammar schools, I bring forward this subject for future consideration.

The general plan laid down by Dr. Deisterweg for the study of history is followed in our elementary schools. Much more might, and should be done in the primary and lowest grammar grades in the matter of story-telling, legends, tales of adventure, etc. Dr. Deisterweg assumes that the formal study of history is taken up at the age of 10 years, but with us and in most American schools this is not done until several years later.

With us, the first formal recognition of history as a branch of study begins in the sixth year of school by reading Edward Eggleston's small history of the United States. The work that year can scarcely be considered a formal study of the subject. The book is biographical in its composition, and illustrates the second stage of historical study. The following, or seventh year, Higginson's school history is read. During the next two years the study is pursued with a conventional text-book, supplemented by various other histories and books of reference. More or less of civics is taught in connection.

The special method of instruction used in the higher grades is that which is known as the topical method. Beginning with the early collonization of the country, the whole period of its growth to the present time is traced out. Only those dates which mark great events are required; the study of the less important occurrences are considered in relation to the greater. The pupils are encouraged to seek the causes of events and their effects, and to clothe their thoughts in their own words rather than to atetmpt to memorize the words of the author. While the words of the book may be the best, and the value of committing to memory is not to be ignored, the pupil's comprehension of the subject is best revealed when he recites in his own language. That the results obtained in the study of history are not satisfactory, is generally admitted. What the reasons are for this are accounted for in different ways by different authorities. Dr. G. Stanley Hall, in writing upon the subject says, "The high educational value of history is too great to be left to teachers who merely hear recitations, keeping the finger on the place in the text-book, and only asking the questions conveniently printed for them in the margin or back of the book.—teachers, too, who know that their present method is a good illustration of how history ought not to be taught, and who would do better if opportunity were offered them." He recommends special teachers for larger towns,

who should go from room to room, or from one school house to another, and give instruction in history alone. This is a contention for departmental instruction, which I have stated before seems to be a point in educational evolution, to which we are tending. Another writer, Thos. Wentworth Higginson, says, "In truth, the whole situation, in respect to history, is described in that well-known conversation between the English clergyman and the play-actor. 'Why is it,' asked the clergyman, 'that you, who represent what everybody knows to be false, obtain more attention than we who deal in the most momentous realities!' 'It is,' said the actor, 'because you represent the truth so that it seems like fiction, while we depict fiction in such a manner that it has the effect of truth.' The moral of it all is, that the fault is not in the child, but in us who write the books and teach the lessons. If the subject loses all its charms by our handling, the fault is ours, and we should not blame the child."

PENMANSHIP.

It is a useful accomplishment to be a good penman. With good teaching and persistent effort on the part of the learner almost any one can become a good penman. The schools should be able at least to make fair penmen of the pupils who go through its grammar schools. Their handwriting should be not only easily legible, but it should be neat and have some character. They should be able to write with ease and with some rapidity.

I regret that I must acknowledge that this is not accomplished in our schools. The teachers labor hard apparently to secure the desired results. But too much of the penmanship is cramped, irregular, and labored. The best results are obtained in the lower primary grades. After that the progress is not so good. Those pupils who continue their course

through the High school are frequently miserable penmen when they graduate. This is not only true of our own schools, but of the great majority. Many places employ a special teacher of this subject, and better results are thereby obtained. Teachers generally attribute the poor results to lack of time and the great amount of written work that is now demanded. They claim that the minds of the pupils are intent on the subject matter to be written, and they therefore grow careless in their penmanship; that the small amount of special instruction that they are able to give in penmanship alone does not overcome this. There is some justice in these claims, but they are not a sufficient excuse. Poor teaching of the subject, the lack of high enough ideals, and failure to persistently exact the best work from every pupil in every grade are largely responsible for the poor results.

The course: In addition to copying words the pupils begin in the lowest grade to form the small letters, beginning with i, u, m, and during the first two years they learn to make all the small letters and capitals. A tracing book is taken in the third year, and writing books are used throughout the remaining primary and through the grammar grades. The writing lessons are alternated with the drawing lessons. These are usually preceded by movement exercises for the purpose of securing freedom of movement.

Of course the special writing lessons represent a very small part of the writing done by the pupils. They are constantly writing, and their penmanship in their written work seldom compares favorably with that done in their writing books. This should not be so, if the pupils are to acquire a good, permanent style. It would be better if writing books were abolished from the two highest grammar grades, and the time now used in writing in them devoted to writing letters, business forms, etc., with special reference to penmanship.

DRAWING.

The work in drawing is progressing well. The supervisor, with the cordial co-operation of the teachers, is securing good results. The report and outline of course of study which are herewith submitted give fully the aim and scope of the work.

Mr. William E. Hatch, Superintendent of Schools:

Dear Sir,— After a year and a half of service as supervisor of form study and drawing, I herewith submit to you my first report.

To secure a broad and well-balanced training in art education, instruction is given in the three branches into which this subject is properly divided: Construction, to gain a knowledge of the facts of form; representation, to acquire the power to see and to express the appearance of forms as wholes under various conditions; and decoration, which deals with the beauty of form and its relation to decorative art.

In the work of the two lowest grades, the aim is to give the child clear and correct ideas of form, as a basis for thought development. His knowledge of the type forms enables him to classify common objects around him, and awakens his interest in them. His means of expressing ideas of form are language, modeling, making, paper folding and cutting, and free-hand drawing. In this work we aim not so much at accuracy of result, as that it be the expression of the child's own ideas gained by his observation.

In this first work, it seems more reasonable that picture drawing (drawing the appearance of the whole form) should precede the drawing of views, than that views should be taught first, thus following in the drawing the same order observed in the study: first, the whole object, then its analysis into parts.

A change to this effect has been made this year, with good results.

Our text-book, "The Use of Models," has been very much improved in two new primary manuals, which treat of picture drawing and clay modeling in a much more satisfactory way, and give interesting and definite help as suggestions in nature study. These manuals would greatly assist the primary teachers in interpreting the true spirit of form study and its relation to other subjects.

From the third year up to the High school the work is carried on by the use of drawing books, with the accompanying manuals as aids to the teachers.

I feel very grateful to the Superintendent and Drawing Committee for being allowed to introduce these books. The results obtained through their use are surely much better educationally than could be gained in the public schools by drawing on paper. The child has a more definite idea of the three divisions of drawing, and can note his progress, page by page, better than he could on loose papers, taken away after each lesson. The books also furnish correct illustrations and good examples of historic ornament, suitably arranged for growth in the appreciation of beauty.

To cultivate an appreciation of what is good in art, the child should have placed before him, to study and to copy, forms beautiful in outline and proportion, just as one should read choice literature and hear good music to increase their taste for it, and to gain a higher standard of excellence.

In the work of the drawing books a decided advance has been made this year, as both teachers and pupils better understand their use. What is desired is not pages finished with great accuracy, because of much measuring and testing; but the child should be allowed to exercise his judgment as to the placing, size and proportion of the drawing. In free-hand work drawing is not of much value which does not train the mind, the eye, and the hand at the same time, and teach the

children to draw, independent of mechanical helps. The results may be discouraging at first, but better seeing will make better drawing.

Considering the broad scope of this work, the time devoted to it, one hour a week, is quite inadequate to gain as satisfactory results as could be desired. One more half hour spent in pencil practice and rapid sketching would effect great improvement.

For public school work the rule and compass are of value only in the higher grammar grades, where the instrumental drawing of views and patterns, or the working of geometric problems are required. In all work in construction more time is needed for practice in free-hand drawing than for mechanical work, to enable the draughtsman to draw quickly and intelligently the idea in mind before working it out with instruments.

Pictorial art is of special value in education at the present time, as a means of expressing what the child sees, thinks, and learns in every subject, and leads him to closer observation, and hence a better understanding of his subject. His work in illustration should be in close touch with the regular drawing lesson, and should show the result of his training.

Too much stress cannot be laid upon the æsthetic side of art education, which is also a very practical side. If we can lead the child to love the beautiful in form and in nature around him, we are developing his finer sensibilities and are ennobling his whole life. Color is an important factor in æsthetic culture, and we could profitably use a supply of materials to train this color sense.

In looking over the work throughout the city, I can report improvement and progress in every school, and I feel that each year will find the class entering the High school better grounded in this subject.

In the High school work, the aim is to build on the foundation laid in the grammar schools, and to carry the work as far as is practical or possible in a very limited time. Here the

true relation of drawing to other subjects should be considered, and its value as a quick and accurate means of expression recognized. The free-hand sketches of the past year show that the pupils have received good and much needed instruction. This will bear fruit not only in drawing as a separate study, but will supplement the work in history, science, and language.

The drawing in the High school has not yet reached its best development, but every effort is being made to bring the work into line with the best educational thought on the subject.

Through this report I wish to express my thanks to the teachers for their hearty co-operation with all my plans, and the earnest spirit in which they have labored to make this study tell for good in the child's education.

To the Superintendent and Board of Education I express my gratitude for their kindly support, and for the promptness and generosity with which they have met every request for supplies necessary to carry on this work successfully.

Respectfully submitted,

MARY W. GILBERT,
Supervisor of Drawing.

COURSE OF STUDY IN DRAWING.

Form and Drawing. Time, one hour per week.

FIRST AND SECOND YEARS.

Teachers' help: "The Use of Models."

Materials: Type forms and objects based on them; clay; tablets; sticks; paper for folding, cutting and pasting; scissors.

Modes of expression: Language; modeling; folding; cutting and pasting; stick and tablet laying; drawing.

FIRST YEAR.

Solids for first half of year: Sphere, cube, and cylinder.

Solids compared by touch and sight.

Common objects like them mentioned, and a collection of them made.

Actions and name of type form in question.

Modeling of type forms and objects based on them.

Surface: { Plane. / Curved. { Curved. / Round. / Rounding.

Lessons in location and direction.

Lessons in building type forms, (work for the imagination.)

Lessons in seeing type forms and common objects in different positions.

Faces: { Number. / Kind, { Plane. / Curved. { Curved. / Round. / Rounding. / Shape ..... { Circle. / Square. / Oblong. / Position, { Vertical. / Horizontal. / Opposite. / Parallel.

Tablet laying of squares, circles, and oblongs for pleasing arrangement in a row, round a centre.

Clay modeling for faces.

Lessons in location and building of tablets.

Folding and cutting of squares and oblongs; cutting of circles.

Edges: { Number. / Kind, { Straight. / Curved. / Position ..... { Vertical. / Horizontal. / Opposite. / Parallel.

Stick laying for edges.

Pencil holding, and drawing of squares and circles for edges.

Modeling for edges, either type forms or common objects.

Corners: { Outside. / Inside. / Face. } Triface or biface.

Paper folding for corners.

Stick laying and drawing of corners.

Lessons in seeing objects in different positions.

Picture drawings—drawing the appearance of spherical, cubical, or cylindric objects as wholes in various positions.

New solids for second half of year: Hemisphere; square prism; right angled, triangular prisms.

Solids compared by touch and sight.

Actions and name given.

Collection of common objects based on types.

Modeling of type forms and objects based on them.

Surface as to kinds.

Picture drawing of type forms and objects based on them.

Faces studied as to number, kind, shape, and position; new shapes, semi-circle and triangle; new position, oblique.

Tablet laying for pleasing arrangements; border; rosette.

Edges as to number, kind, position; new position, oblique.

Paper folding and cutting for faces and edges.

Stick laying and drawing for faces and edges.

Corners compared: { Sharp. / Square.

Lessons in location and building of solids.

Angles: { Acute, sharp corner. / Right, square corner. / Obtuse, blunt corner.

Drawing of various shapes for angles.

Paper folding for angles.

Clay modeling of various shapes built up on tablet, for study in shape, edges, angles, etc.

The six solids in review, recognizing them first by touch, then by touch and sight.

Modeling the six type forms and objects based on them.

Review of faces by free-hand cutting and by drawing.

Edges reviewed by stick laying and cutting.

Picture drawing from objects.

Picture drawing from memory.

Faces from memory.

An arrangement of tablets from memory.

SECOND YEAR.

New solids for first half of year: Ellipsoid, ovoid, and equilateral triangular prism.

Solids compared with first six type forms and studied according to outline for previous grade as to surface, faces, edges, and corners.

New shapes: Ellipse, oval, and equilateral triangle.

Tablet laying for arrangement of borders and rosettes.

Modeling of type forms and of common objects based on them.

Paper folding of circle, square, and oblong, to teach diameter and diagonal.

Practice in drawing new shapes, and in correct holding and position of the pencil.

Study of leaves based on the ellipse and on the oval.

Drawing of leaves.

Drawing and modeling of leaf in relief on clay tablet.

Triangles compared and cut free-hand.

Modeling raised squares, circles, triangles, etc., on clay tablets.

Picture drawing of single solids and of groups, as sphere on cube, triangular prism on square prism, etc.

Picture drawing of common objects based on types.

Bisection, trisection, and quadrisection taught.

Paper folding and cutting, to illustrate these principles.

Pleasing figures dictated in drawing to apply the same principles.

Proportion 1 to 2, 2 to 3, and 3 to 4 taught.

Paper folding and cutting for proportion.

Pleasing figures dictated in drawing for proportion.

Symmetry of figures studied and "axis of symmetry" taught by folding, cutting, and drawing.

The nine solids reviewed by sight, by free-hand cutting of faces, and by modeling.

Seeing lessons and picture drawings of common objects based on type forms, singly and in groups.

A mental image of the nine solids described, and stories told of common objects based on them.

Picture drawings from memory.

New solids for second half of the year: Cone, pyramid, and vase form.

New tablet, isosceles triangle.

Solids compared and studied in the usual way.

Modeling and picture drawings of these solids.

Faces cut free-hand.

Free-hand cutting and drawing of vase shape for reversed curve.

Building new solids for work in imagination and language.

Tablet laying for arrangement.

Modeling and drawing of common objects based on type forms.

Drawing, cutting, and pasting of pleasing figures, such as cross, star, quatrefoil, and rosette, on background ot colored paper.

Borders cut and pasted of pleasing units.

Modification of simple units by drawing.

Modeling the same in raised figure on clay tablet.

Study of leaves, and modeling in relief.

Flowers drawn and applied to borders and rosettes.

A general review of the two years' work.

Beginning with the third year, and extending through the ninth year, the course of study is "Prang's Complete Course in Form Study and Drawing," and is found in the drawing books, accompanied by manuals for the teachers' use.

The work is given under three heads: Construction, Representation, Decoration. The drawing books used are as follows:

Third Year — Drawing books 1 and 2.
Fourth Year — Drawing books 2 and 3.
Fifth Year — Drawing books 3 and 4.
Sixth Year — Drawing books 4 and 5.
Seventh Year — Drawing books 5 and 6.
Eighth Year — Drawing book 7.
Ninth Year — Drawing book 8.

HIGH SCHOOL.

Time, three-quarters of an hour per week. Course, experimental.

First Year.

Model drawing: singly and in groups, in planes of light and shade.
Simple still life groups in planes of light and shade.
Construction: working drawings.
Geometric problems.
Historic ornament.
Perspective problems, (free-hand.)
Sketching of natural forms and conventionalization for design.
Sketches once in two weeks.

Second Year.

Continuation of design from natural forms.
Cast drawing in outline and in planes of light and shade. (Mediums, soft black and sepia pencils.)
Talks on historic ornament.
Drawings of historic ornament. (Sepia and black pencils.)
Review of the leading features of first year's work.
Sketches once in two weeks.

Third Year. (Optional.)

Free-hand perspective problems.
Cast drawing in planes of light and shade, and in values. (Charcoal.)
Lectures and notes on historic ornament.
Historic ornament from cast.
Construction.
Design from historic ornament and from nature.
Sketches once in two weeks.

Fourth Year. (Optional.)

Class to be divided as to whether they wish free-hand or mechanical drawing.

Work in still life in charcoal.
Work from casts in charcoal.
Design — Design for wall papers, ceilings, book covers and useful objects in pencil and color.
Historic ornament.
Lectures on historic styles, their time and origin. Drawing from casts for styles of ornament.

MANUAL TRAINING.

I classify under this heading the sewing, cooking and wood-working. I have given so much space in previous reports to urging the extension of this line of work in our schools, and to showing its educational value, that little need be said here in regard to it. I am glad to be able to report that my views have met with the indorsement of the Board: that to the sewing, which has been in the schools for years, has been added a cooking school; also that a wood-working school, or manual training school proper, has been equipped, and, when the City Council gives the necessary money to employ a competent instructor, will be put into operation. I will treat of the work of each of these departments separately and briefly.

SEWING.

This branch of manual training has been a part of the school curriculum for years. The girls only take it. The course was formerly continuous for six years, beginning with

the third year of school life. With the opening of the cooking school the course in sewing was shortened one year. It now ends with the seventh year of school.

Course:

Third and Fourth Grades—Folding papers in different width hems; samples on canvas with worsteds of all the stitches; squares of cloth with the different stitches in colored thread; making sewing aprons and small bags for holding sewing materials.

Fifth and Sixth Grades—Different stitches in sewing and basting, except button-holes; darning and glove mending.

Seventh Grade—Garments of all kinds; darning button-holes; glove mending; feather stitching and hemstitching.

THE COOKING SCHOOL.

This school went into operation in October, 1893. The delay in completing the building prevented the opening of the school in September as was intended. The teacher is a graduate of the Boston Normal Cooking school.

The attendance is compulsory upon the girls of the eighth and ninth grades grammar and those of the mill schools, and optional to those of the High school. The girls of the higher grades in the country schools are permitted to attend also, if they desire. There are twenty classes; a half day once in two weeks being given to each class. On the day that a class is to take its cooking lesson it reports directly to the teacher of the cooking school.

The school has been popular from the start. All those in the High school who desired to attend the school could not be accommodated. Each two weeks about 350 girls receive a lesson in cooking. I consider the opening of this school an event of mark in the history of our schools. The good effect of the teaching given there will be felt in many homes, and its beneficial influence will be wide-spread. The pupils who have the advantages of its instruction will know better how to administer a home. It will be a promoter of health, happiness, and good morals.

Some idea of the work done there may be obtained from the following brief outline of its course of instruction:

Course of Study in the New Bedford Cooking School, 1893 and 1894.

FIRST LESSON.

Preliminaries: Hours, plan of work, work of housekeepers, uniform, etc.

Fire building: Principles of combustion, laws of heat, etc.

System of measurements.

SECOND.

STARCH AND WATER.

Water: Temperature of boiling and simmering, effects produced, etc.

Starch: Cellular structure of plants; dietetic value of vegetables; effect of heat and moisture on starchy food; cooking temperature, etc.

Dishes to illustrate: Potatoes, plain, mashed, riced and lyonnaised.

THIRD.

STARCH.

Starch as a grain and as a powder.

Dishes to illustrate: Rice, cornstarch, mould and white sauce.

FOURTH.

ALBUMINOUS FOODS—EGGS.

Albumen: Properties of, cooking temperature, occurrence, etc.

Dishes to illustrate: Soft and hard cooked eggs, dropped eggs, and egg vermicelli.

FIFTH.

ALBUMINOUS FOODS—MILK AND EGGS.

Milk: Composition, dietetic value, care of, etc.

Use of food principles in the body.

Dishes: Rennet custard, soft custard, and omelette.

SIXTH.

ALBUMINOUS FOODS—MEAT.

Meat: Classification, structure, etc., with lesson on marketing.

Dishes to illustrate: Broiled steak and tomato soup, with crisped crackers.

SEVENTH.

ALBUMINOUS FOODS—MEAT.

Roasting and left-overs.
Dishes to illustrate: Roast beef and cottage pie, with cranberry sauce.

EIGHTH.

ALBUMINOUS FOODS—FISH.

Fish: Structure, care of, use, etc.
Dishes to illustrate: Baked fish and fish chowder.

NINTH.

ALBUMINOUS FOODS—ALBUMENOIDS AND GELATINOIDS.

Gelatine: Source, properties, etc.
Dishes to illustrate: Soup stock, with croutons; also drippings.

TENTH.

CEREALS AND FLOUR.

Study of cereals.
Study of wheat.
Use of baking powder.
Dishes to illustrate: California breakfast food, with baked apples and baking powder biscuits.

ELEVENTH.

FERMENTATION AND BREAD MAKING.

Study of fermentation.
Dishes to illustrate: Bread and rolls.

TWELFTH.

CAKE MAKING.

Kinds, uses, objective point in cooking, manipulations, etc.
Dishes: Plain cake and water sponge cake.

THIRTEENTH.

PASTRY.

Materials, utensils, manipulations, baking, etc.
Dishes: Squash and apple pie.

FOURTEENTH.

INVALID COOKERY.

Process of digestion and care of the sick.
Dishes: Beverages and oyester stew.

FIFTEENTH.

INVALID COOKERY.

Dishes: Oatmeal gruel, beef tea, Irish moss, blanch mange and oranges for an invalid.

SIXTEENTH.

FROZEN DISHES AND SALADS.

Principles of latent heat considered.
Dishes: Sherbet and lobster salad.

THE MANUAL TRAINING SCHOOL.

The benches and tools have been purchased for this school, which will be located in the Sylvia Ann Howland school house in a room built specially for this purpose. The boys probably will attend from the higher grammar grades and the lower class in the High school. The plan is to have each pupil who attends give half a day once in two weeks to this work, as the girls do in the cooking school.

I expect this school to be as popular with the boys as the cooking school is with the girls. I have no doubt that many boys who appear dull and take but slight interest in their regular work, will take this with an interest that will uplift them in every way. Nor do I have any doubt, but the time given by the boys in this school, instead of retarding their advancement in their other studies, will prove a positive help in that direction. The work at first will be confined to Sloyd; some wood carving and turning may be done. But from these I expect to see developed a much broader scheme of work. I certainly hope that the City Government will soon grant the necessary appropriation to put this school into operation.

MUSIC.

There has been excellent progress during the year. The supervisor is thoroughly equipped for his profession, and works diligently and with definite plan. At his urgent request the Board substituted during the year the Mason system of charts

and books for the Normal system. I think this will aid to greater effectiveness, if for no other reason, that the supervisor is thoroughly in sympathy with the Mason plan.

The course given in the schools has been furnished me by the supervisor, and is submitted:

MUSIC COURSE.

FIRST GRADE.

The pupils of this grade are taught by rote all the songs on the first 17 pages of the New First Music Reader. They are also to be taught by note all the songs and exercises on the first 17 charts of the New First Series.

Other songs and exercises that the Supervisor of Music may direct.

SECOND GRADE.

Pupils are taught by rote all the songs from pages 19 to 40 inclusive in the New First Music Reader.

Review charts 13, 14, 16 and 17.

Pupils are taught to sing by note all the songs and exercises on charts 18 to 40, inclusive, of the New First Series.

Other songs and exercises that the Supervisor of Music may direct.

THIRD GRADE.

Pupils are taught to sing by note through the first 17 charts of the New Second Series; also through the first 25 pages of the New Second Music Reader.

Pupils of this grade to learn the places of the letters on the staff from small g to two-lined g.

Other songs and exercises that the Supervisor of Music may direct.

FOURTH GRADE.

Pupils of this grade finish the New Second Series of Charts; also learn the songs and exercises on pages 25 to 63, inclusive, of the New Second Reader.

The pupils of this grade are taught to sing by pitch names the following scales: C, G, D, A, E, F, Bb, Eb, and Ab.

Other songs and exercises that the Supervisor of Music may direct.

FIFTH GRADE.

Pupils sing from the New Second Music Reader.
Review pages 38 to 47, and learn page 54.
" " 58 and 59, and learn page 63.
" " 64 and 65, " " " 66.
" " 70 and 71, " " " 74.
" " 76 and 77, " " " 80.
" " 82 and 83, " " " 85.
" " 88 and 89, " " " 91.
" " 94 and 95, " " " 96.
Other songs and exercises that the Supervisor of Music may direct.

SIXTH GRADE.

The New Third Music Reader, pages 1 to 34, receive careful study. Beginning with page 35, the harmonies and one song in each of the major and minor keys to be studied. Following this any of the songs on the first 130 pages of the book.

Other songs and exercises that the Supervisor of Music may direct.

SEVENTH GRADE.

The New Third Music Reader. Review to bottom of 17th page. Part II. Three part singing, pages 9 to 63, inclusive.

Other songs and exercises that the Supervisor of Music may direct.

EIGHTH GRADE.

The New Fourth Music Reader. All the songs and exercises of the first 98 pages.

Other songs and exercises that the Supervisor of Music may direct.

NINTH GRADE.

Review the "Harmonies" of the major and minor keys, and sing the solfeggios and songs from 99th page on through the book.

Other songs and exercises that the Supervisor of Music may direct.

HIGH SCHOOL.

Part songs and choruses suitable for High schools.

ELEMENTARY SCIENCE.

Under this heading may be classed the work done in physiology and hygiene — studies required by statute to be taught in the schools — and "Nature Work," so called, being

work in natural history, physics, and chemistry. The method of teaching these subjects is the laboratory method. By means of the objects themselves and by simple illustrative experiments in their presence the pupils are led to observe, and investigate for themselves, and to record the results of their observations by drawings and in writing. In this way not only their thinking powers are stimulated and trained, and their reasoning faculties developed, but the teaching in these studies is made to supplement and strengthen that in other branches. Thus the correllation of these studies is effected: this is of great importance in these days of shortened school hours and multiplicity of subjects.

I regard the introduction of this line of work into our schools one of the most important movements toward progress that has been made for years. It is refreshing to enter a school room and find the pupils with flowers or minerals in their hands which they have gathered out of school; to witness the experiments illustrating the workings of nature's laws; to see the interest of the children in the work as contrasted with the apathy too often manifested by them in other studies.

The teachers generally endorse the movement most heartily. They of course feel their limitations in presenting these subjects, much more probably than in other studies, because few have had special training for the work. They are, however, doing all in their power to get an intelligent conception of the object of the work, and to acquire the best methods of presenting it. It is better that a beginning be made if the results at first are far from satisfactory; for experience will soon develop confidence and better methods of presentation; with these will come success.

That the teachers may be guided and assisted in this work, the services of Mr. A. C. Boyden, professor of natural history in the Bridgewater Normal school, have been secured to instruct them. He meets them the last Saturday forenoon of each month, outlines the work and suggests methods. His

lessons have been most successful, and it would be of great advantage to the schools if he could be secured to do more in this way. It has occurred to me that an assistant might be provided for the teacher of science in the High school, who could also assist in other lines of work there, and part of Mr. Allen's time devoted to directing this work in the lower schools.

The Course of Study for Elementary Schools Recommended by the Conference Appointed by the "Committee of Ten."

The National Educational Association, at its meeting in 1892, appointed a committee of ten persons, with President Eliot as chairman, who should select members of conferences to be organized to consider programmes of secondary schools in the United States and the requirements for admission to college, each conference to consider the proper limits of its subject, the best methods of instruction, the most desirable allotment of time for the subject, and the best methods of testing the pupils' attainments therein.

Ten conferences were appointed of leading school men throughout the country on the leading subjects taught in the schools. In addition to their recommendations for secondary schools, they recommend a course of study for primary and grammar schools, which I give below, in contrast to the course pursued in our schools. Of the 90 members of the conferences 47 were in the service of colleges or universities, 42 in the service of schools — chiefly academies and high schools — and one was a government official. In presenting the course the committee say that it does not yield without modification a practical programme, but furnishes the materials from which serviceable programmes may be made.

SUBJECT.	ELEMENTARY GRADES.—PRIMARY AND GRAMMAR SCHOOLS.							
	First Year. Age, 6–7.	Second Year. 7–8.	Third Year. 8–9.	Fourth Year. 9–10.	Fifth Year. 10–11.	Sixth Year. 11–12.	Seventh Year 12–13.	Eighth Year. 13–14.
3. ENGLISH.	Pupils to reproduce orally stories told them, to invent stories and describe objects.		Supplementary reading begun — and continued through all the grades. Composition begun—writing narratives and descriptions — oral and written exercises on forms and the sentence.				From this grade no reader to be used.	Grammar, 3 p. a week.
4. MODERN LANGUAGES.					Elective German or French, 5 p. a week.	Elective German or French, 4 p. a week.	Elective German or French, 3 p. a week, at least.	Elective German or French, 3 p. a week, at least.
5. MATHEMATICS.	Arithmetic during first eight years, with Algebraic expressions and symbols and simple equations — no specific number of hours being recommended.				Concrete Geometry, 1 p. a week.	Concrete Geometry, 1 p. a week.	Concrete Geometry, 1 p. a week.	Concrete Geometry, 1 p. a week.
6. PHYSICS, CHEMISTRY, AND ASTRONOMY.	Study the natural phenomena 5 p. a week through first eight years by experiments, including physical measurements and the recommendations of Conferences 7 and 9.							
7. NATURAL HISTORY.	Through first eight years 2 p. a week of not less than 30 minutes each, devoted to plants and animals; the instruction to be correlated with language, drawing, literature, and geography.							
8. HISTORY.					Biography and Mythology. 3 p. a week.		American History and elements of civil government, 3 p. a week.	Greek and Roman History, 3 p. a week.
9. GEOGRAPHY.	Time allotted in first eight years to equal that given to number work. The subject — the earth, its environments and inhabitants, including the elements of astronomy, meteorology, zoölogy, botany, history, commerce, races, religions, and government.							Physical Geography.

Abbreviation: p. = a recitation period of 40–45 minutes.

THE HIGH SCHOOL.

It is not unreasonable to expect to find in the High school of a city teaching superior to that of any other of its schools. The highest salaries paid any of the teachers in the city are paid there, and should command teachers possessing not only breadth of education, but skill in the art of teaching itself. None should be considered elligible for appointment to teach in it who do not possess a college education or its equivalent; and cities like ours that pay fair salaries, at least, can command in addition successful experience. It is not true, however, that the best quality of teaching is always found in High schools. Nor has there been a sufficiently high standard maintained in many places in the selection of teachers for the positions.

While I do not wish to cast any reflection upon the teaching corps of our High school, it is a fact that not a lady teacher in it is a college graduate. The assignment of studies, and therefore the working of the school, has been affected by this condition. It gives me pleasure to be able to state that the Board has recently adopted a regulation by which hereafter applicants for positions in the High school must be college graduates or shall have had an equivalent preparation.

Some of the teaching in the school is too exacting and beyond the capabilities of the average pupils in the class. Such teaching obscures rather than enlightens the subjects treated, and is very discouraging to the learners. Then, again, the lecture method of teaching is indulged in to a degree that cannot be approved. I have called attention to this before. The children are told so much that the facts of knowledge even become confused in their minds. This method of teaching should only be used as an occasional form, not as a regular one, with pupils of the schools. It is adapted to university instruction, and has its limitations even there. As opposed to these forms of teaching, which are apt to be peculiar to those teachers who are thoroughly versed in their subject,

are those that fail from laxity in preparation, or in conducting the recitations. But the school should not be criticised as a whole because these faults exist in individual teaching. All schools have their weak spots, and to these should the remedies be applied when they are known.

There is a criticism made frequently against teachers, from which some in this school are not exempt, that they use the weapon of sarcasm upon the pupils either as a punishment for misbehavior or for failure in lessons. No teacher can indulge in sarcasm and not lose the respect and good-will of those at least against whom it is employed, and it stirs the wrong emotions in all hearers. I doubt the usefulness of any teacher who is prone to sarcasm, whatever his or her other good qualities; no good comes from its use, and it is productive always of evil.

I agree with the principal, whose report follows, that the efficiency of the school would be increased by some modification of the course of study; the course in English needs paring; the college course should be readjusted; the military department should be established on a different basis, and other minor changes should be made. I agree most heartily with what he has to say in regard to the attendance. He might have gone further and spoken of other harmful influences. There is always a small contingent of pupils in every High school who are very derelict in their duty.

At present in the school there are certain pupils, chiefly boys, who are getting but little out of the school, and are a positive injury to its best interests. Parents must not expect the school to do the best by their children unless they themselves do their duty also; the school has all it can do in its own legitimate sphere, and cannot be expected to assume all the responsibilities of the home in addition to its own.

Mr. Ray Greene Huling, who had served as principal of the school for seven years, accepted a call to Cambridge in June to take charge of its English High school. Under Mr. Huling

the school had increased in numbers, and during his service several improvements in the course of study and in the general work of the school were made.

The new principal, Mr. Charles Sturtevant Moore, took charge of the school at the beginning of the fall term. He has labored assiduously since that time to inform himself of the condition of the school and its needs. He brings to the position the ripe experience of 20 years of service in both public and private schools, and being a stranger to both the school and teachers, has no cause for prejudice in respect to any one or the previous administration of the school. I have, for these reasons, asked him to embody his views on the school in a report. He has done so, and it is herewith submitted.

While refraining from any attempt to account for the weaknesses which he points out, he proceeds to show that they exist, and suggests some remedies. I can endorse his recommendations in general, for they are in line with my own views and previous suggestions, and I hope they will receive the early attention of the School Board.

The High School, New Bedford, Mass.

Mr. William E. Hatch, Superintendent of Schools:

Dear Sir, — In accordance with your request, I respectfully submit the following Report on the High school.

The registration from September 5, 1893, to January 1, 1894, has been as follows: Boys, 175; girls, 232; total, 407; the average number belonging, 395; the average daily attendance, 374.

The following statistics may also be of interest and value: The entering class numbered 139, of whom 56 took Latin. The whole number of pupils taking Latin is 108 — boys 36, girls 72; the whole number of pupils taking Greek is 16 — boys 6, girls 10; the whole number of pupils preparing for

college or scientific school is 66 — boys 46, girls 20: post-graduates, boys 2, girls 0.

Following the wishes of the High School Committee, I have given but half of my time to instruction, reserving half for supervision of the work done in the various rooms. It was my wish to take the largest section of the entering class, that I might, at the beginning of their course, set for them the standard which they were to maintain throughout the four years, and also that I might become acquainted with the outfit and mental condition of those whom the High school undertakes to train. In this way I could estimate more accurately the possibilities of the school so far as the material with which it has to do is concerned. I was unable to do this, as there was no teacher, outside of the teachers of special departments, qualified to make the necessary interchange of work.

The half of my time set aside for supervision has been reduced to about one-third by necessary attention to routine matters, to discipline, (general and individual,) and to calls from parents. It has not been easy, therefore, to acquaint myself intimately with the work of all the classes, of which there have been about two hundred and fifty per week, while I have had but fifteen periods per week free for such work.

I have succeeded, however, in getting a fair comprehension of the spirit and methods of each teacher, of the quality of the work of the pupils as a whole, and also in many individual cases.

During the second half year the necessity of taking an additional class will further reduce the time available for supervision, much to my regret.

About one-tenth of my free time has been given to individual pupils who seemed to need advice, encouragement, or stimulus to aid them in critical periods of their school life. The responsibility placed upon the principal, of knowing what is being done throughout the school and of determining from

personal knowledge, largely, fitness for promotion, carries with it the necessity of having ample opportunity for personal acquaintance with the work of all the classes. The plan is an excellent one, and cannot fail to be productive of good for both teachers and pupils.

Some defects in the course of study are noticeable, and I have, consequently, asked the Committee to consider the advisability of revising it. I will mention here one or two of these defects.

There are two classes for beginners in Latin, one in the fourth class and one in the third class. This makes necessary two grades of Latin work throughout the course, and is neither useful nor economical. To quote from an important educational report recently published, "Every subject which is taught at all should be taught in the same way and to the same extent to every pupil as long as he pursues it, no matter what the probable destination of the pupil may be or at what point his education is to cease."

Four years are ample, with the average pupil, for a thorough preparation for college, *provided the studies are arranged with a constant regard to the end in view.* A number of the pupils now in the High school will be compelled to take five years, and some six years, to prepare for college. While in a few cases this is due to a late decision in favor of college preparation, in the others it is the result of a faulty arrangement of the course of study. Whatever the cause, the reputation of the school suffers, as the impression will be given that pupils cannot fit for college in four years at the High school.

Some steps have already been taken to relieve individual cases, but for permanent relief a "college preparatory course" should be carefully arranged and efficiently maintained. I will not now enlarge upon other defects, trusting that the whole subject will be acted upon by the Committee.

A firm believer in the value, physically, mentally and morally, of military drill properly conducted, I trust that the Committee

will soon re-establish it with more in the way of equipment and variety of work than before, to stimulate ambition, pride and interest, that there may be a strong and wholesome *esprit du corps*.

The relations of the High School Corps of Cadets to the school authorities need to be set forth clearly, and then strictly maintained.

A well considered course of physical exercises under a competent instructor should, in my judgment, be provided for the girls, as is done in many of the best schools elsewhere.

A strikingly large number of tardinesses, absences and dismissals before the close of the session, far in excess of what seems necessary, and yet receiving the parents' sanction, appears to point to a failure on the parents' part to realize the actual loss and injury accruing to the children from such irregularity. Parents cannot rightly expect the best results for their child from the school life and influence when they frequently abridge the school hours, and thus practically teach the child that the time spent in school is of comparatively little value. Furthermore, irregularity on the part of some tends to produce irregularity on the part of others, and there certainly rests upon each parent the obligation to co-operate with the Committee (who have arranged the hours in the best interests of all concerned) in making the school as efficient as possible, not only in the line of instruction, but also in its efforts (in accordance with the Statutes) to develop moral qualities, such as punctuality and fidelity to duty.

Before closing I would say that the spirit of the pupils as a whole is good. There is no lack of natural ability or of willingness to undertake assigned work. The pupils' self-reliance, however, needs to be cultivated. They must be trained to have their knowledge more available and consciously to connect it more practically with life and its demands.

Respectfully yours,

CHARLES STURTEVANT MOORE,

Principal.

STATISTICS OF INTEREST.

Graduates of 1893 pursuing advanced courses:

	Girls.	Boys.	Total.
College,		3	3
Medical,		2	2
Swain school,			
Harrington Training school,	7		7
Institute of Technology,		4	4
Post-graduate in High school,	4	5	9
	11	14	25

Post-graduates in the High school during 1893, now pursuing advanced courses:

	Girls.	Boys.	Total.
College,			
Medical school,			
Harrington school,	4		4
Technology,		1	1
	4	1	5

ENTERING PUPILS.

Pupils entering High school, September, 1893:

	Girls.	Boys.	Total.
From New Bedford public schools,	67	61	128
From other schools,	5	6	11
	72	67	139

Post-graduates in the High school, 1892:

	Girls.	Boys.	Total.
January to June,	7	4	11
September to December,	7	4	11
	14	8	22

INTENTIONS CONCERNING ADVANCED COURSES.

Classical course (to enter college with Greek):

	Girls.	Boys.	Total.
Senior class,	1	3	4
Sub-senior class,	2	3	5
Junior class,	1		1
Sub-junior class,	2	7	9

To enter college without Greek:

	Girls.	Boys.	Total.
Senior class,	6	5	11
Sub-senior class,			
Junior class,	1	7	8
Sub-junior class,	1	9	10

To enter scientific or medical schools:

	Girls.	Boys.	Total.
Post-graduate,		2	2
Senior class,		6	6
Sub-senior class,		2	2
Junior class,		4	4
Sub-junior class.			

PEDAGOGICAL LIBRARY.

Books added during the year are as follows:

No. 208.	Children's Rights	Kate Douglas Wiggin.
209.	Theory of Educational Sloyd	Salomon.
210.	Kindergarten Stories and Morning Talks	Wiltse.
211.	Entomology for Beginners	Packard.
212.	Nature Study	Jackman.
213.	How to Know the Wild Flowers	Dana.
214.	Flowers and Their Pedigrees	Grant Allen.
215.	Native Trees	L. W. Russell.
216.	A Year Among the Trees	Wilson Flagg.
217.	Trees of the Northern U. S.	Apgar.
218.	From Seed to Leaf	Newell.
219.	Working Drawings in Sloyd	Gustaf Larsson.
220.	Report of the Commission on Manual Training and Industrial Education.	
221.	Lange's Apperception	DeGarmo.
222.	Inventional Geometry	Wm. George Spencer.
223.	Inventional Geometry	Wm. George Spencer.

CONCLUSION.

It is no easy task to prepare a report each year for our citizens which will give them the information they may desire about their school system and its operation, and set forth the proper suggestions for its improvement. And, after all, it is also doubtful whether very many of those who should be

most interested in the schools, those whose children attend them, take even the pains to glance at its pages after it is prepared. I often wonder that so many parents are willing to remain in almost complete ignorance of the schools to which year in and year out they entrust the physical, mental and moral well-being of their children. I for one wish that more of them would take an active interest in everything that concerns the schools. If they did teachers and pupils would be stimulated and encouraged in their efforts, and the acts of the school authorities being better understood, would receive heartier endorsement, or at least more intelligent criticism.

It appears to me, in dealing with the many cases of discipline, truancy, and neglect of work that arise each year that many parents are inclined to throw too much responsibility upon the schools. The teachers strive hard to inculcate habits of order, neatness, politeness, regularity, and diligence in performance of duty, and morality, but their efforts must be supplemented by the proper direction of the children outside the school if the teaching is to have its proper effect in school. Moral lessons in the schools cannot counteract the pernicious influences of the street and the cheap variety show; and parents who permit their children to drift about the city day and evening, or attend entertainments which are debasing, must not be surprised if their children are not what they should be. Again, it is difficult for the schools to enforce upon the pupils habits of obedience to law, and diligence in the performance of duty, if at home there is no government, and the whims of the children are catered to there. Children should be sent to school regularly and promptly; their pastimes out of school should have the parents' thought and direction; their complaints of injustice done them in school should receive consideration; but only after careful investigation of the facts should judgment be passed. If these things were done, there would be less friction between pupils and teachers; the children would learn to expect justice, not approval, at home, whether right or wrong; and

they would grow up with better dispositions, and trained to a fuller sense of justice and duty.

In closing, I wish to express to the teachers my appreciation of their work, their ready response to suggestion, and their co-operation in carrying forward new lines of work.

To the School Committee, much credit is due for their unselfish labor in the interests of the schools, and I wish to express here my thanks for their support and their forbearance.

Respectfully submitted,

WILLIAM E. HATCH,

Superintendent of Schools.

LIST OF TEACHERS.

HIGH SCHOOL.

Summer street, between Mill and North streets.

Grade.			
	Charles S. Moore, principal,	25 Seventh street,	$2,750
	Charles T. Bonney, Jr., sub-master,	121 Washington street,	1,600
	Charles R. Allen, science teacher,	County street,	1,600
1	Sarah D. Ottiwell, assistant,	184 Kempton street,	900
2	Lydia J. Cranston, "	129 Elm street,	900
2	Elizabeth P. Briggs, "	366 Union street,	900
3	Lucretia N. Smith, "	72 Foster street,	900
3	Mabel W. Cleveland, "	81 North street,	800
4	Mary E. Austin, "	512 Kempton street,	900
4	Emma K. Shaw, "	72 High street,	900
4	Helen L. Hadley "	196 Grinnell street,	800
	Katharine M. Crabtree, drawing,	256 Union street,	700

GRAMMAR SCHOOLS.

FIFTH STREET:

Fifth street, corner of Russell street.

	Allen F. Wood, principal,	111 Acushnet avenue,	$1,900
5	Lydia J. Macreading, assistant,	17 Bonney street,	600
5	Harriet F. Hart, "	233 Acushnet avenue,	600
6	Mary E. Allen, "	25 Madison street,	600
6	Sarah E. Stoddard, "	352 County street,	600
7	Emma A. McAfee, "	63 Fifth street,	600
7	Janet Hunter, "	55 North Sixth street,	600
8	Blanche W. Sheldon, "	28 Fifth street,	600
8	Mary A. Kane, "	127 Grinnell street,	600
9	Grace L. Carver, "	147 Acushnet avenue,	550
9	Nancy H. Brooks, "	135 Fourth street,	600

MIDDLE STREET:

Summer street, between Elm and Middle streets.

	George H. Tripp, principal,	Fairhaven,	$1,900
5	Helen Ring, assistant,	271 Union street,	600
6	Katharine Commerford, "	Ashland street,	600
6	Etta M. Abbott, "	233 Middle street,	600
7	Lucy B. Fish, "	115 Maxfield street,	600
7	Julia C. Gifford, "	9 Arch street,	475
8	Clara B. Watson, "	37 Fifth street,	600
8	Helen McCoy, "	68 Walden street,	450
9	Clara S. Vincent, "	233 Middle street,	600
9	Agnes J. Dunlap, "	117 Hillman street,	600

PARKER STREET:

Parker street, near County street.

	Francis J. Heavens, principal,	64 Willis street,	$1,900
5	Anna L. Jennings, assistant,	115 Maxfield street,	600
5	Agnes W. Lindsey, "	105 Elm street,	600
6	Susan H. Lane, "	264 Pleasant street,	600
6	Emma D. Larrabee, "	14 Parker street,	600
7	Regina M. Paul, "	29 Parker street,	500
7	Martha A. Hemenway, "	5 Lincoln street,	600
8	Elizabeth B. Brightman, "	14 Parker street,	600
8	May L. Pettey, "	22 Pope street,	600
8	Mariana N. Richmond, "	34 High street,	600
9	Mary E. Sturtevant, "	220 Summer street,	600
9	Emily A. Delano, "	East Freetown,	600

THOMPSON STREET:

Thompson street, corner Crapo street.

7	Katharine N. Lapham, principal,	Union street,	$1200
8, 9	Lizzie M. Briggs, assistant,	351 County street,	450
8	Cora B. Cleveland, "	81 North street,	500
9	Mary A. Macy, "	72 Bedford street,	600
9	Daisy M. Butts, "	116 Willis street,	500
13	Leonora B. Hamblin, "	South Orchard street,	550
13	Annie L. Brownell, "	15 Sherman street,	500

HARRINGTON TRAINING SCHOOL:

Court street, corner of Tremont street.

Josephine B. Stuart, principal,	464 County street,	$1,500
Anna W. Braley, assistant,	619 County street,	1,000
Belle Almy, "	201 Cottage street,	450
Fannie M. Spooner, "	70 Morgan street,	425

	Julia W. Corish, "	86 Mill street,	$425
	Grace W. Russell, "	152 Purchase street,	400
	Kate Moore, "	105 Park street,	425
	Florence A. Poole, "	168 Mill street,	400

PRIMARY SCHOOLS.

ACUSHNET AVENUE:

Acushnet avenue, near Grinnell street.

10	Jane C. Thompson, principal,	100 Washington street,	$700
10	Caroline S. Silva, assistant,	81 Washington street,	550
11	Hattie L. Finlan, "	186 County street,	550
11	Elizabeth Bennett, "	46 State street,	500
12	Margaret H. Holmes, "	661 County street,	450
12	Annie M. King, "	1074 South Water street,	425
13	Harriet N. Hyatt, "	Acushnet,	425
13	Julia M. Pilling, "	24 Seventh street,	425
13	Harriet L. Cornell, "	151 Middle street,	425

I. W. BENJAMIN:

Division street, between Acushnet avenue and Second street.

	Jane E. Gilmore, principal,	245 Acushnet avenue,	$800
10	Susan M. Tompkins, assistant,	2 Court street,	550
10	Nellie W. Davis, "	49 Bedford street,	550
11	Dora A. DeWolf, "	169 Middle street,	425
11	Sarah E. Kirwin, "	101 South Sixth street,	550
11, 12	Charlotte M. Allen, "	118 Fifth street,	425
12	Sarah A. Winslow, "	315 County street,	550
12	Alice A. Taylor, "	299 County street,	500
12	Eleanor V. Tripp, "	12 Sherman street,	450
13	Annie C. O'Connor, "	299 County street,	550
13	Mabel Bennett, "	114 High street,	450
13	Julia A. Hunt, "	20 Court street,	400
13	Emma L. Gartland, "	51 Washington street,	425

CEDAR STREET:

Cedar street, corner of Maxfield street.

10	Annie S. Homer, principal,	117 Hillman street,	$650
11	Bessie P. Pierce, assistant,	124 Hillman street,	550
12	Abby D. Whitney, "	59 Hill street,	550
12	Annie L. Edwards, "	62 North street,	550
13	Willetta B. Nickerson, "	85 Morgan street,	550
13	Mabel L. Hathaway, "	743 County street,	450

CEDAR GROVE STREET:

Cedar Grove street, near Acushnet avenue.

	Maria B. Clark, principal,	131 Chestnut street,	$750
10	Flora E. Estes, assistant,	535 Purchase street,	550
10, 11	Kate Sweet, "	287 Kempton street,	500
11	Carrie A. Shaw, "	94 State street,	550
11	Isabella F. Winslow, "	67 North street,	550
12	Annie G. Brawley, "	68 Walden street,	550
12	Edith K. Weeden, "	614 County street,	500
13	Mary J. Eldridge, "	200 South Second street,	550
13	Caroline O. Bonney, "	52 Bonney street,	425
13	Ruth E. Pease, "	658 County street,	425
13	Sara M. Hatch, "	1213 Acushnet avenue,	450
7, 8	Lizzie E. Omey, "	63 Thomas street,	600
9	Alice A. Richardson, "	743 County street,	425

CANNONVILLE:

Rockdale avenue.

10, 11	Adelaide J. McFarlin, principal,	Cottage street,	$550
12, 13	Ethel W. Denham, assistant,	363 Cottage street,	425

DARTMOUTH STREET:

Dartmouth street, corner of Hickory street.

10	Isadore F. Eldridge, principal,	44 Sherman street,	$700
10, 11	M. Eva Schwall, assistant,	11 Bonney street,	550
11	Edith M. B. Taber, "	82 Walden street,	450
12	Annie F. Smith, "	18 Bonney street,	500
12	Nellie H. Cook, "	6 South Ash street,	450
12, 13	Mary C. Barstow, "	337 South Orchard street,	550
13	Grace H. Potter, "	100 Madison street,	550
13	Sara H. Kelley, "	24 Seventh street,	550

FOURTH STREET:

Fourth street, corner of Madison street.

10	Sarah H. Cranston, principal,	129 Elm street,	$650
11	Eliza H. Sanford, assistant,	112 Fourth street,	550
11	Grace Covell, "	128 School street,	450
12	Sarah E. Sears, "	21 Griffin street,	550
13	Lillie C. Tillinghast, "	53 Walnut street,	550
13	Annie L. Macreading, "	17 Bonney street,	550

SYLVIA ANN HOWLAND:

Pleasant street, between High and Kempton streets.

10	Carrie E. Footman, principal,	72 State street,	$600
11	Mary J. Graham, assistant,	12 Court street,	550
12	Helen J. Kirk, "	27 Franklin street,	550
13	Amelia Lincoln, "	87 Walden street,	550

LINDEN STREET:

Linden street, near Ashland street.

10	Elizabeth P. Spooner, principal,	129 Hillman street,	$600
11	Isabella Luscomb, assistant,	245 Cedar street,	550
12	Isadora Foster, "	48 Parker street,	550
13	Lucy S. Leach, "	91 Maxfield street,	550
13	Ruth M. Tripp, "	238 Acushnet avenue,	400

MERRIMAC STREET:

Merrimac street, corner of State street.

10	Sarah H. Hewins, principal,	111 Merrimac street,	$600
11	Addie West, assistant,	232 Pleasant street,	550
12	Annie I. Dexter, "	11 Franklin street,	550
13	Harriet S. Damon, "	223 Pleasant street,	550

MAXFIELD STREET:

Maxfield street, corner of Pleasant street.

13	Mary B. White, principal,	57 Foster street,	$600
12	Annie E. Pearce, assistant,	151 Hillman street,	550
11	Clara C. M. Gage, "	78 Mill street,	550
10	Mary E. Pasho, "	169 Grinnell street,	500

UNGRADED SCHOOLS.

ACUSHNET:

Acushnet avenue.

Charlotte C. Carr, principal,	56 Spring street,	$700
Belle B. Wheeler, assistant,	2 Mt. Vernon street,	600
Caroline O. Pierce, "	1 Spruce street,	550

CLARK'S POINT:

Mary E. McAuliffe, principal,	380 Purchase street,	$450

NORTH:

Mary I. Ashley, principal,	Clifford,	$600

PLAINVILLE:

Mary E. Haney, principal,	Shawmut,	$575

ROCKDALE:

Lillian T. Thomas, principal,	Box 275,	$500

NORTH MILL:

In Merrimac street school building.

Emma R. Wentworth, principal,	117 Hillman street,	$15.50 per week.
Mary L. Hillman, assistant,	81 Mill street,	10.00 "

SOUTH MILL:

In Thompson street school building.

Lucy J. Remington, principal,	Fifth street,	$15.50 per week.
Ruby M. Tripp, assistant,	407 Cedar street,	10.00 "

EVENING DRAWING SCHOOL.

George H. Nye,	$9.00 per week.
George A. Stetson,	7.00 "
Catharine M. Crabtree,	6.00 "

EVENING ELEMENTARY SCHOOLS.

FIFTH STREET:

Oliver W. Cobb,	$6.00 per week.
Mrs. C. T. Johnson,	3.00 "
Grace H. Potter,	3.00 "
Lillie C. Tillinghast,	3.00 "
Clara B. Watson,	3.00 "
Alice A. Taylor,	3.00 "
Kate Moore,	3.00 "
Nellie H. Cook,	3.00 "
Annie C. Hart,	3.00 "
Mary J. Graham,	3.00 "
Sarah E. Stoddard,	3.00 "
Lizzie M. Briggs,	3.00 "
Julia C. Gifford,	3.00 "
Grace W. Russell,	3.00 "
Annie L. Burbank,	3.00 "

MERRIMAC STREET:

Mary A. Kane,	$6.00 per week.
Alice A. Richardson,	3.00 "
Harriet L. Cornell,	3.00 "
Mabel L. Hathaway,	3.00 "
Sarah E. Kirwin,	3.00 "
Florence A. Poole,	3.00 "
Charlotte M. Allen,	3.00 "

PARKER STREET;

George H. Tripp,	$6.00 "
Maria B. Clark,	3.00 "
Emma D. Larrabee,	3.00 "
Mary F. Wilde,	3.00 "
Emma R. Wentworth,	3.00 "
Julia W. Corish,	3.00 "
Sara L. Tallman,	3.00 "

CEDAR GROVE STREET:

Allen F. Wood,	$6.00 "
Zenas M. Briggs,	3.00 "
Annie G. Brawley,	3.00 "
Nannie P. Slocum,	3.00 "
Emma B. McCullough,	3.00 "
Grace L. Carver,	3.00 "
Mary R. Hinckley,	3.00 "
Dora A. DeWolf,	3.00 "
Flora E. Estes,	3.00 "
Robert E. Washburn,	3.00 "
Emma A. McAfee,	3.00 "
Cora G. Bingley,	3.00 "
Mary E. McAuliffe,	3.00 "
Elizabeth D. Hicks,	3.00 "
Lucia E. Bliss,	3.00 "
Grace L. Bates,	3.00 "
Abby R. Johnson,	3.00 "

THOMPSON STREET:

Joseph P. Kennedy,	$6.00 "
Mrs. K. K. Whelden,	3.00 "
Janet Hunter,	3.00 "
Emma L. Gartland,	3.00 "

Annie M. King,	$3.00 per week.
Helen Ring,	3.00 "
Julia A. Hunt,	3.00 "
Mrs. K. E. Kirwin,	3.00 "
Alice Comey,	3.00 "
Belle Almy,	3.00 "
Marion H. Swasey,	3.00 "
Mrs. Annie Murphy,	3.00 "

1894—CITY DOCUMENT NO. 7.

Fifteenth Annual Report

OF THE

BOARD OF HEALTH,

City and Quarantine Physician,

OF THE

CITY OF NEW BEDFORD,

TO THE

CITY COUNCIL,

FOR THE YEAR 1893.

NEW BEDFORD:
EVENING JOURNAL COMPANY, PRINTERS TO THE CITY.
1894.

REPORT.

OFFICE OF THE BOARD OF HEALTH,
January, 1894.

To the City Council of the City of New Bedford:

GENTLEMEN,—The Board of Health herewith respectfully submit their fifteenth annual Report.

The organization of the Board is as follows:

Nathaniel Hathaway, Chairman.

William N. Swift, Physician to the Board and Quarantine Physician. Thomas W. Cook.

Employes of the Board:

William E. Macomber, Health Inspector.

Louis H. Richardson, Inspector of Plumbing.

Susie J. Small, Clerk.

Both the last named hold their appointment under civil service rules.

Feb. 25, 1893. At a meeting of the Mayor and Aldermen the sum of eight thousand four hundred and ninety-seven dollars and fifty cents ($8,497.50) was appropriated to defray the expenses of the Board for the year 1893. This amount was increased by transfers at various times to fourteen thousand five hundred ninety-five dollars and fifty-six cents ($14,595.56).

This amount was expended as follows:

Salaries,	$2,871.00
Garbage,	9,500.00
Incidentals,	2,151.70
Whole amount,	$14,522.70

Inspector,	$5.00
Louis H. Richardson,	.54
Mercury Publishing Co.,	1.08
E. Anthony & Sons,	1.20
Edwin Dews,	10.75
Inspector,	5.00
George D. Richards,	.60
So. Massachusetts Telephone Co.,	17.50
Evening Journal Co.,	.94
Inspector,	5.00
D. J. Sullivan,	.75
E. Anthony & Sons,	1.90
Mercury Publishing Co.,	11.33
Evening Journal Co.,	1.64
Robert W. Taber,	1.35
Edgar H. Gammons,	9.00
Edwin Dews,	1.00
I. L. Ashley,	3.50
Inspector,	.54
F. M. Douglass,	4.30
Inspector,	5.00
Mercury Publishing Co.,	4.00
Dr. W. N. Swift,	12.00
Nathaniel Hathaway,	25.00
Inspector,	5.00
Mercury Publishing Co.,	30.67
Buchell Shoe Co.,	8.10
E. Anthony & Sons,	4.80
Evening Journal Co.,	4.69
Edwin Dews,	11.46
Dr. E. E. Waite,	10.50
So. Massachusetts Telephone Co.,	2.32
So. Massachusetts Telephone Co.,	.75
Dr. D. C. Ashley,	18 00
Evening Journal Co.,	2.50
Dr. W. N. Swift,	12.00
"	14.00
Inspector,	5.00

Mercury Publishing Co.,	$15.79
" " "	6.00
E. Anthony & Sons,	2.92
F. M. Douglass,	6.50
C. H. & H. A. Lawton,	8.70
E. Dews,	1.00
Inspector,	10.00
Ballard & Kirschbaum,	1.00
James McFarlin,	3.00
So. Massachusetts Telephone Co.,	17.50
Evening Journal Co.,	3.75
Samuel Peckham,	46.00
Mercury Publishing Co.,	8.29
Electric Light Co.,	.75
E. Dews,	1.00
E. G. Reynolds,	15.50
Manuel Brown,	28.00
E. Anthony & Sons,	3.82
W. E. Bradley,	2.00
Inspector,	5.00
Briggs & Lawrence,	9.00
Hart & Akin,	4.29
I. L. Ashley,	20.50
Mercury Publishing Co.,	13.50
Edwin Dews,	3.50
Dr. D. C. Ashley,	40.50
Dr. C. A. Pratt,	75.00
Dr. W. N. Swift,	23.00
Inspector,	5.00
Briggs & Lawrence,	3.75
E. Anthony and Sons,	2.52
Mercury Publishing Co.,	12.67
Evening Journal Co.,	2.50
Tug "Volunteer,"	35.00
Dr. C. A. Pratt,	50.00
Inspector,	5.00
E. Anthony & Sons,	.96
Mercury Publishing Co.,	14.39
Evening Journal Co.,	.89
Dr. C. A. Pratt,	25.00
W. E. Macomber,	50.00
E. G. Reynolds,	19.00
Tow Boat Co.,	70.00
C. H. & H. A. Lawton,	10.70
Mercury Publishing Co.,	.71

Inspector,	$5.00	
F. M. Douglass,	19.80	
Dr. C. A. Pratt,	6.00	
	$973.41	

SMALL POX BILLS, 1893.

Dr. C. D. Prescott,	$15.00	
Manuel Brown,	14.00	
H. O. Firme,	55.00	
"	7.00	
J. H. Mayo,	1.83	
Samuel W. Peckham,	7.00	
Samuel S. Broadbent,	9.00	
C. F. Cushing,	3.50	
Hart and Akin,	12.58	
Herbert S. Pierce,	15.40	
Sanders & Barrows,	38.40	
Manuel Brown,	75.00	
Mary Santos,	6.00	
T. J. Peed,	216.00	
Herbert S. Pierce,	47.50	
Dr. W. N. Swift,	370.00	
George W. Hunter,	89.34	
Wright Drug Co.,	5.70	
Dr. A. M. Pierce,	10.00	
Belle T. Gray,	95.79	
Sanders and Barrows,	83.75	
S. S. Paine,	.50	
Dr. C. D. Prescott,	15.00	
Manuel Brown,	14.00	
Whole amount,	$1,178.29	
Whole amount appropriated,		$14,595.56
Whole amount expended,		14,522.70
Balance unexpended,		$72.86

This balance was transferred to unappropriated funds.

On December 27, 1892, a suspicious case was reported at No. 170 South Second street. The next day the diagnosis of small-pox was clear, and the patient, a Portuguese, 26 years old, was taken to the small-pox hospital. He lived in the upper tenement of the three-tenement house with his wife and

child, 16 months old. His wife preferred to go the hospital with her husband, taking the child.

The origin of this case was obscure. After careful investigation it was evident there was no connection whatever with the small-pox of the previous summer. The patient had been out of the city two weeks before he became ill, and it is supposed he contracted the disease at that time.

The family that had been living in the middle tenement of the infected house had moved out the previous week, so that they were simply kept under observation. The woman living down stairs refused to go to the quarantine house, and was therefore quarantined at home.

A policeman was put on guard day and night, and no one was allowed to come from or go to the house.

The work of disinfecting the premises was then begun. The tenement was filled with steam and sulphur fumes; the bed, clothing, and furniture that had been in the room where the patient was ill were destroyed. All the wood work and furniture left was washed in a solution of corrosive sublimate. All the paper was removed from the walls, and finally the whole tenement was repapered and painted.

The man's case was light, and was evidently modified by vaccination.

On January 9, 1893, the woman and child both came down with varioloid. The cases were both mild, and both patients did well.

On January 31 all signs of desquamation had disappeared in the three patients, and they were transferred to the quarantine station.

On February 2d they were discharged.

There has been no occurrence of small-pox from these cases, and this fact shows how important it is to take every precaution in dealing with the disease.

February 28, 1893. Section 3, Rule 8, of Plumbing Regulations was amended as follows:

"All plumbing work in new buildings or new work in old buildings shall be tested by the plumber, under the supervision of the Board of Health, with the hydraulic or such other test as the Board may direct; and in case the work does not stand the test, and the same is not repaired within ten days, the water shall be turned off by order of said Board, and not let on again till the plumbing has been pronounced satisfactory by the said Board."

The effect of this amendment is to save much time and to place the expense of testing where it belongs.

It seems proper in this place to discuss the attitude of the Board with respect to the law requiring the licensing of plumbers.

The acts of 1893, chapter 477, provide for issuing of licenses to those wishing to engage in the business of plumbing.

This act consists of eight sections, and its ostensible object is to insure good plumbing work. So far as the city of New Bedford is concerned, there is no need for more legislation on the subject of plumbing. Statute law gives the Board control of house drainage, and the rules of the Board thoroughly cover the essential features constituting good plumbing work. A plan of proposed work must be submitted to and approved by the Board before such work is commenced.

During construction several inspections are made, and upon completion a final inspection and test made under the supervision of the inspector of the Board.

In the opinion of the Board, all sanitary requirements of good plumbing are thus provided for, and further legislation can, in the case of New Bedford, only complicate what is now a comparatively simple problem. It seems improbable that those engaged in the trade of plumbing are incompetent to manage their own affairs without special legislation. In conclusion, the law will undoubtedly be much modified along

the lines suggested at the last meeting of Massachusetts Association of Boards of Health before it is generally useful.

March 2, 1893. Quarantine regulations amended to read as follows:

QUARANTINE LAWS OF THE STATE OF MASSACHUSETTS.

[*Public Health—Public Statutes.*]

CHAPTER 80.

SEC. 62. A town may establish a quarantine ground in a suitable place within or without its own limits; but if such place is without its limits, the assent of the town within whose limits it may be established shall be first obtained.

SEC. 63. Two or more towns may, at their joint expense, establish a quarantine ground for their common use in any suitable place either within or without their own limits; but if such place is without their limits, they shall first obtain the assent of the town within whose limits it may be.

SEC. 64. The board of health in each seaport town may from time to time establish the quarantine to be performed by vessels arriving within its harbor; and may make such quarantine regulations as it judges necessary for the health and safety of the inhabitants.

SEC. 65. Such regulations shall extend to all persons, goods, and effects arriving in such vessels, and to all persons who may visit or go on board of the same.

SEC. 66. Whoever violates any such regulation after notice thereof has been given in the manner before provided in this chapter, shall forfeit a sum not less than five nor more than five hundred dollars.

Sec. 67. The board in each seaport town may at all times cause a vessel arriving in such port, when such vessel or the cargo thereof is in its opinion foul or infected so as to endanger the public health, to be removed to the quarantine ground and thoroughly purified at the expense of the owners, consignees, or persons in possession of the same; and may cause all persons arriving in or going on board of such vessel, or handling the cargo, to be removed to any hospital under the care of the board, there to remain under their orders.

Sec. 68. If a master, seaman, or passenger belonging to a vessel on board of which any infection there is or has lately been, or is suspected to have been, or which has been at or has come from a port where any infectious distemper prevails that may endanger the public health, refuses to make answer on oath to such questions as may be asked him relating to such infection or distemper by the board of health of the town to which such vessel may come (which oath any member of the board may administer), such master, seaman, or passenger shall forfeit a sum not exceeding two hundred dollars; and if not able to pay the said sum he shall suffer six months' imprisonment.

Sec. 69. All expenses incurred on account of any person, vessel, or goods, under quarantine regulations, shall be paid by such person or the owner of such vessel or goods respectively.

QUARANTINE RULES AND REGULATIONS OF THE CITY OF NEW BEDFORD.

1.

Every vessel arriving from a foreign port shall immediately proceed to the quarantine grounds, and shall be visited by the quarantine officer between sunrise and sunset as soon as possible after such arrival. Such officer shall examine the bill of health, and shall inspect the vessel, and shall require of the captain or master answers in duplicate under oath to the following questions:

City and port of ———. Quarantine questions put to the master of ———. Name of vessel ———. Date ———.

1. From whence is the vessel you command?
2. How many days have you been on the passage?
3. Have you touched anywhere?
4. If so, where?
5. At what date?
6. For how long?
7. Did you take in cargo or passengers there?
8. Have you any bills of health? If so, produce them.
9. Have you communicated with any vessel in the course of your cruise or passage?
10. If so, at what date?
11. Name of vessel?
12. From what ports were they?
13. Was any sickness existing on such vessels?
14. If so, what?
15. During the course of your cruise or passage, what cases of disease have occurred on board?
16. At what dates?
17. Has any death occurred on board your vessel since you left the last port?
18. If so, what date, and from what cause, to the best of your knowledge?
19. Has yellow fever, typus fever, cholera, or any other contagious disease ever existed on the ship? If so, when?
20. What is the number of officers, crew, and passengers?
21. Are the officers and crew the same as when you started?
22. How many passengers in first cabin, second cabin, steerage?
23. Have you any reason to think that yellow fever, cholera, typus fever, or any other contagious disease existed in the vicinity of the port from whence you sailed, or near any

others at which you have touched, or any vessel with which you have communicated during the present cruise or voyage?

24. What is your cargo?

25. To whom consigned?

26. What is the present sanitary condition of the vessel, cargo, crew, and passengers, to the best of your knowledge and belief?

27. Have you a medical officer? Give his name and produce his report.

———————— Signature of Master or Captain.

Sworn to and subscribed before me, an officer empowered to administer oaths, etc.

———————— (Official title.)

Quarantine Station, ———— 18 .

This vessel has permission to proceed [or is detained for observation].

———————— Health Officer.

2

The department of the quarantine shall be placed under the superintendence of the Board of Health, and they shall have the sole and entire control of any hospital or hospitals which may be established within the limits of the city by competent authority for the reception of persons having a disease dangerous to the public health, and of all vessels lying at quarantine as hereafter directed, and of all persons employed at said hospitals or on board said vessels. It shall be their duty to cause all the ordinances of the city, all the regulations they may institute, and all the laws of the Commonwealth relating to the quarantine of vessels, to be duly executed and enforced.

And it shall be the duty of the Board of Health to provide a suitable number of yellow flags, and whenever any vessel or

vessels shall be ordered to the quarantine grounds for purification, the master of said vessel shall hoist one of said flags at the head of the mainmast, there to be kept during the daytime, so long as said vessels shall remain at quarantine.

3

The Board of Health shall appoint, to hold office at the pleasure of that body, a quarantine physician, whose duty it shall be, at such times as they shall direct, to visit every vessel arriving, liable to quarantine; to direct in what manner she shall be cleansed, if necessary, and what articles from her shall be landed, washed, buried, or destroyed, and what articles of cargo may be unladen; to direct the care and attendance of the sick, for whom he shall prescribe and supply medicine according to his best skill; to report every day to the Board of Health the condition of every sick person; to direct the pilots where and in what particular place vessels shall be anchored; and to grant a certificate to any passenger by him discharged from quarantine, at any time before the discharge of the vessel in which such passenger arrived, and to give a certificate to the master of each vessel, when, in his discretion, he shall think proper that such vessel be discharged from quarantine.

The quarantine physician, whenever required by the Board of Health, or whenever he may consider it his duty so to do, shall report to them the state and condition of the hospitals and of the vessels at quarantine; and it shall be his duty to recommend, from time to time, such measures as he may deem expedient relative to all matters connected with the quarantine regulations and operations of the city.

4

The quarantine physician shall receive such compensation as the City Council shall authorize, but such compensation shall not preclude him, in extraordinary cases, from charging to the

sick under his care, for medicine and medical attendance, such sums as the Board of Health may approve.

In case no provision is made for the compensation of the quarantine physician, he shall receive such fees as the Board of Health may approve.

5

The Board of Health may appoint a keeper to each hospital which may be established, and all such attendants and assistants as may be required to carry them on, or to carry into operation the laws, by-laws, and regulations connected with the quarantine, which persons, so appointed and employed, shall be subject to all directions given them by the Board of Health, and receive such compensation as the Board shall allow.

A quarantine shall be had of all vessels, their officers and crews, passengers and cargoes, that come within the harbor of New Bedford, on board of which any person shall have died or been sick of any contagious or infectious disease during the passage to New Bedford, or which are foul or infected after their arrival, or which are from, or have brought their present cargo, or any part thereof, from any port or place where any infectious or contagious disease prevails, or recently has prevailed; *provided, however,* that in the latter case public notice shall first be given by the Board of Health of such fact of the prevalence of infectious or contagious disease.

6

The quarantine shall be had and performed at an anchorage ground south of the Eleven Foot bank, under the direction of the quarantine physician; and shall continue on every such vessel, until the master shall receive a certificate from the said physician, that he may be discharged. *Provided, however,* that in case of unreasonable delay by the quarantine physician to grant such certificate, the owner, agent, or consignee of such vessel, or any part of her cargo, may apply to the Board

of Health, who may on being satisfied of the propriety of discharging such vessel from quarantine, issue such certificate.

7

The master of every vessel discharged from quarantine shall, within twenty-four hours after such discharge, deliver at the Board of Health office the certificate and flag he shall have received of the quarantine physician, and pay into the city treasury the sum of five dollars, for which he shall be entitled to a certificate from the City Clerk to authorize his entry at the custom house.

8

During the time that such vessel is performing quarantine, no person, without a permit from the quarantine physician, shall go on board thereof, except those employed by or under the quarantine physician, and no person without a permit as aforesaid shall go within a line upon the land adjoining any public hospital, to be designated by the quarantine physician, except as aforesaid; and every person who shall transgress in either of these cases shall be liable to be considered as contaminated with infection, and held to undergo purification in the same manner and under the same regulations and restrictions as those performing quarantine, and shall there remain until discharged by the quarantine physician, and the said physician, or any one empowered by him for the purpose, may forcibly detain him for the purposes aforesaid.

9

The Board of Health shall have the right, at any time, to examine the bill of health issued to any vessel arriving from any port where such documents are usually granted, to enable them to decide what measures it may be necessary to take with

regard to the situation and purification of such vessel and cargo.

10

Any person offending against any of these regulations, from the first to the ninth, both inclusive, shall pay a sum not less than three, nor more than twenty dollars; and in addition he shall be liable to all the penalties provided by the laws of the Commonwealth in relation to quarantine.

April 13, 1893. The Board, acting under authority of Public Statute, chapter 80, section 24, vacated houses on Turner's court known as Holy Acre. This act the Board regards as one of the most important taken during the year. The statute places the entire responsibility on the Board, and in the case of Turner's court much property was involved.

The houses in question were so low that it was impossible to drain them, and it seems unfortunate that there is no means of preventing building or moving houses already built to such locations.

In every growing city building is continually outgrowing the drainage system. But for such buildings drainage can be supplied before they are occupied.

In the case of such a locality as Turner's court once was, there is no possibility of drainage, and there was no surer or quicker way to cause steps to be taken to thoroughly and permanently put this locality in habitable condition. Permission was given in writing, as provided by law, to occupy the buildings vacated, November 25, 1893, following.

The premises No. 5 Summer street court, and also premises in Smith street court, were vacated during the year and still remain vacant.

As an example of building operations which will ultimately cause the city a large outlay for sewers, or cause expense by

being a fever spot, attention is called to the collection of small houses on West Maxfield street. There is no immediate prospect of draining this locality; the water supply is obtained from a shallow well a short distance south of the buildings. There apparently is no law to prevent the building of such tenements; fortunately there is sufficient to prevent their use if they prove dangerous.

The policy of the Board has been and will be to vacate all such tenements at the first sign they give of danger to the public health.

The Board, in the consideration of all such questions, involving as they do large expenditure in increased rents by a class of citizens who can ill afford to pay for anything but the actual necessities of living, consider each case upon its merits, and in each case consider only the minimum limit of safety.

Before dismissing the subject of restricting building, the Board would recommend that action be taken on the proposed building rule establishing the height of cellar floors above high water. At present it is impossible to drain many cellars on the water front, and a still more serious consequence is the overflow of the sewer into the cellar. These cases can be treated as nuisances, but this seems a roundabout and expensive method.

The nuisance caused by privies is being rapidly abated, when such a nuisance occurs on the line of a sewer. The Board has in many cases granted extension of time during the past fall and winter, except in the most urgent cases, because of the unusual stagnation of business and consequent scarcity of money.

June 1, 1893. The contract for collection of garbage and dead animals was awarded to Edgar H. Gammons, the only bidder, for a term of three years at $12,000 per year; this price also included the disposal of the garbage, etc.

In the work the contractor employs five (5) double teams, two (2) single teams, one (1) team for dead animals, and one

(1) team which is always at the disposal of the Board for inspection of the work.

During the cold weather, November 1st to May 1st, the collection is made twice per week; for the remainder of the year three collections per week are made. Offal from fish markets and dead animals are removed daily throughout the year.

The containers in which garbage is removed consist of stout iron-bound oak barrels having metallic covers. It is a practical necessity to keep all but one barrel covered, and even this must be kept covered when in transit, as there is no place other than its place to carry the cover. The barrels have many advantages over larger cart containers such as being moved, readily cleaned and repaired.

Garbage and dead animals are disposed of by burial on a farm about three miles from the centre of the city.

The contractor has the lease of forty acres, of which only twenty are in actual use. The land is so far removed that no complaints have been received since the first few loads were deposited in June, 1891.

The Board made several visits to the farm during the year, and the present appearances are that the land now used will destroy the garbage for some years to come.

All garbage is ploughed in daily, and when about one acre is covered a quickly growing crop is planted, and in a surprisingly short time, on digging down, no garbage can be found. Thus the essential condition for rapid decomposition in the earth is attained, namely, superficial burial. The objection to superficial burial is that the burial products may more readily become exposed, and so cause nuisance, or by drying blow about, and under proper conditions cause disease. This objection is met by the facts, that the material buried is not of such a character as frequently contains disease germs, and the moist and heavy condition of the soil is such that it is seldom dry except upon the surface. The farm is remote from any source of water supply.

So far the method is satisfactory in all respects. The material is thus utilized as a fertilizer, which is its only value, as the cost of extracting the fat, the only constituent of value, would more than counterbalance the estimated return.

The most serious difficulty presented in the problem of collection is that the containers in which householders deposit garbage are improper, most often because insufficiently covered, so that the contractor is forced to remove rain water, snow and ice in addition to garbage. This naturally increases the expense of collection, and is of course borne by the city. Receptacles of insufficient size and of such material that they become filthy, and are impossible to clean, are also a source of nuisance.

July 29, 1893. An arrest was made for collecting garbage without a license, and a conviction was secured.

October 26, 1893. The Board voted to inspect the sanitary condition in respect to drainage of the various school houses in the city. All with the exception of the William street school were found in good condition. The School Committee were notified on October 27th of the condition of this school.

Following is the number of permits granted by the Board during the year:

To re-inter bodies, 119.

To empty privy vaults and cesspools, 38.

To enter sewers, 446.

Livery and boarding stables, 10.

Number of applications for keeping swine during the year was 57. Of this number, 54 were granted.

Number of complaints received and investigated, 94.

Number of notices served, 89.

Number of inspections made, 2,364.

Following nuisances were abated:

Filthy and overflowing vaults and cesspools, 67.

Defective and clogged drains, 51.

Defective vaults, 17.

Defective plumbing, 18.

Filthy premises, 67.
Filthy barns and cellars, 5.
Filthy ash barrels, 8.
Filthy slaughter houses, 1.
Filthy water closets, 23.
Filthy sand-catchers, 6.
Manure piles, 6.
Emptying vaults without a license, 2.
Unlicensed pig pens, 6.
Feeding swill to cows, 3.
Privy vaults removed, 32.

Work accomplished during the year with relation to the plumbing and drainage of buildings:

Number of permits issued, 672.
New buildings, plumbed, 317.
Alterations in old work, 351.
Number of inspections made, 1,650.
Number of complaints investigated of old plumbing and drainage, 76.
Number of old plumbing systems condemned, 52.

All the work has been done in strict accordance with the regulations of the Board.

In July, 1893, twelve cases of typhoid fever were reported to the Board. In August, twenty; in the first week of September nine cases were reported. At that time the Board employed Dr. Charles A. Pratt to investigate each case that had been reported since August 1st. His report is given below. See page 31.

The Board also thought it important to investigate the milk supply of the city, as a possible source of the origin of the increase of typhoid fever. In one case it was found that the family were supplied with milk by a milkman whose wife and child were ill with typhoid fever. This man only supplied a few families. No other case of typhoid fever occurred in these families. This man was ordered to discontinue selling milk.

Notices were sent to each individual having a milk route in the city to call at the office of the Board of Health. Each man was asked the following questions:

1. Is there any sickness at present in your house, or in your family, or are you connected in any way with people who have been recently sick, or with any house where there has been sickness?

Do you purchase milk from any one who has been sick, or had sickness in his family or house?

2. If so, what is the nature of this sickness?

3. Has there ever been a case of typhoid fever in your house?

No case of typhoid fever or other contagious disease was discovered in this way.

The Board feeling the importance of further investigation of the milk supply, sent its officer, William E. Macomber, with Dr. D. C. Ashley to make a personal inspection of the premises and herds of each milkman, who had supplied any family with milk where there had been a case of typhoid fever, since the first of August. No cases of typhoid fever were found in the families or employes of these milkmen, and in only one instance were the premises in an unsatisfactory condition.

Considering the result of this investigation with Dr. Pratt's table, it is evident that the cause of the increase of typhoid fever was not infected milk.

The city water supply was also thoroughly investigated. The location of the cases of the disease was evidence against any infection.

By referring to the map, it is shown that in a large part of the city there were no cases of typhoid fever. It is also shown that there were few cases on the line of the main supply pipes near the distributing reservoir. There would probably have been a large number of cases in this locality had there been any infection of the water supply. The whole water

supply was inspected and investigated without showing any source of infection.

The result of the investigation is negative so far as showing any one source for the increase of typhoid fever. The majority of cases occurred where the sanitary surroundings were good. It is the opinion of the Board that in the vicinity of New Bedford there exist many wells infected with typhoid fever. The people using water from such wells may become so accustomed to the poison that they are not affected by it, but a person drinking the infected water for the first time may contract the disease.

During August of last summer there were many people out of work in the city. This gave them an opportunity to go out into the surrounding country. The inference is that, when thirsty, they drank water from the nearest well.

The investigation of the well on Palmer's Island shows it to be badly situated, and a possible source of infection. The analysis, when taken in conjunction with the location of the well, indicates an unsatisfactory condition of the water. See analysis page 30.

After the disease became epidemic, it was evident that contact was an important cause for its spreading.

A possible source of infection, in a number of cases that occurred among the employes of the Rotch Mill No. 2, was a spring of water that runs beneath the No. 1 Rotch Mill. The water from this spring was at times noticed to have a salt taste, and at one time this was so pronounced as to be disagreeable. The spring was discovered on making the excavation for the cellar of Rotch Mill No. 1. It enters at the northwest corner of the mill. The water is led in a ditch just inside the west foundation wall. Near the south end of the west wall the spring water is carried by several open ditches about a hundred feet along the south wall to a sewer. At the entrance of this sewer there is a fall of eight inches. The bottom of the cellar is not more than two feet above the level of ordinary high

tide. There is no doubt but what the brackish taste was due to water thrown back from the sewer by an exceptionally high tide.

There are a number of sewers draining into the salt water near these mills. In the district drained by these sewers there were at that time many cases of typhoid fever.

This spring water being cold and clear was very popular with the men employed in building the new Rotch Mill. Before this time the mill authorities had attempted to prohibit its use, but it was found impossible to prevent it entirely.

There were five cases of typhoid fever occurring in men who drank this water. These cases developed within two weeks of each other, and this was soon after the spring water was noticed to be brackish. It seems probable that the source of infection in these cases was from the polluted salt water.

The plan of thoroughly investigating each case of typhoid fever that is reported is of great importance to the community, as in this way the source of infection may be at once detected and the spread of the disease prevented.

Physicians are required by statute law to report a case of any disease dangerous to the public health as soon as the diagnosis of such a case is clear. It ought to be understood by the physicians themselves, and by the community, that any delay in this duty exposes the public to an unnecessary danger.

There is no more important function of the Board of Health than the prevention of disease. It is plain that this work cannot be properly done unless the Board is at once notified of the existence of cases of diseases dangerous to the public health.

People are often indignant that the Board will not give their children permission to return to school until six weeks after the beginning of a case of scarlet fever. This time is stated by authorities to be the minimum time during which the disease is contagious. The patient may seem perfectly

well, but so long as the "peeling process" goes on may give the disease to another person.

It has been the custom of the Board to accept the diagnosis of the attending physician without question, but when a case of suspected contagious disease is reported to the Board it is investigated at once.

It is a regulation of the Board that the bodies of persons who shall have died of small-pox, diphtheria, scarlet fever, yellow fever, Asiatic cholera or typhus fever shall be immediately permanently sealed, and shall be buried on the same or the next day; also that there shall be no public funeral. These regulations seem very severe to the friends of persons dying of contagious diseases, but they are the same as are almost universally adopted by boards of health, and are without question absolutely necessary to prevent the spread of disease.

MORTUARY REPORT FOR 1893.

Cause of Death.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
Apoplexy,	3	2	2	3	5	4	2	2	2	2	5	5	37
Atelectasis,	1	.	2	4	1	.	1	.	.	.	.	2	11
Abdominal abscess,	.	.	1	.	.	.	.	.	.	.	.	.	1
Accident,	.	.	.	1	.	.	1	.	.	.	1	2	5
Ascites,	.	.	.	.	1	.	.	.	.	1	.	.	2
Aneurism of aorta,	.	.	.	.	1	.	.	.	.	.	.	.	1
Anus, imperforate,	.	.	.	.	1	.	.	.	.	.	.	.	1
Albuminuria,	.	.	.	.	.	.	.	1	.	.	.	.	1
Asphyxia,	.		.	.	.	.	.	.	.	2	.	.	2
Anæmia,	1	.	.	.	.	.	.	.	.	.	.	.	1
Bronchitis,	3	5	3	1	1	2	1	.	.	2	1	7	26
Bronchitis, capillary,	.	.	.	1	.	1	.	.	1	.	.	2	5
Brain disease,	.	2	.	.	1	.	1	.	1	.	.	.	5
Burns,	.	.	.	2	.	.	.	.	.	.	.	.	2
Basedow's disease,	.	.	.	.	.	.	.	1	.	.	.	.	1
Bullet wound of head,	.	.	.	.	.	1	.	.	.	.	.	.	1
Croup,	1	.	.	.	.	.	.	.	.	.	.	.	1
Cancer,	1	3	.	2	2	.	1	3	.	.	1	4	17
" of stomach,	2	3	2	3	.	.	1	1	1	2	.	1	16
" of uterus,	.	1	1	.	.	.	.	1	.	.	.	.	3
" of breast,	.	.	.	.	.	.	1	.	.	1	.	.	2
" of ovary,	.	.	.	.	.	.	.	.	1	.	.	.	1
" of tongue,	.	.	.	.	.	.	.	.	.	.	.	1	1
Convulsions,	3	2	6	4	4	3	5	4	4	3	4	3	45
Cyanosis,	.	.	.	.	.	.	1	.	.	.	.	.	1
Cholera infantum,	.	.	.	.	.	.	33	27	18	4	2	2	86
Cholera morbus,	.	.	.	.	.	.	1	1	1	.	.	1	4
Cystitis,	.	.	.	.	.	.	.	1	.	.	1	.	2
Diphtheria,	2	1	.	2	.	2	1	.	1	1	1	1	12
Debility,	.	2	2	2	1	.	.	1	.	1	.	3	12
" infantile,	6	7	6	8	5	8	8	10	12	7	6	6	89
Drowning,	.	1	.	.	1	2	.	.	1	.	.	.	5
Dentition,	.	1	.	.	.	.	.	.	.	.	.	.	1
Decapitation,	.	.	1	.	.	.	.	.	.	.	.	.	1
Diabetes,	.	.	1	.	.	1	.	.	.	.	1	.	3
Diarrhœa,	.	.	.	.	.	.	2	6	6	8	.	1	23
Dysentery,	.	.	.	.	.	.	.	1	1	2	.	.	4
Erysipelas,	.	1	.	.	1	.	.	.	.	.	.	1	3
Enteritis,	.	.	.	.	.	.	3	3	5	.	1	.	12
" gastro,	.	1	1	1	1	1	1	1	4	3	.	.	14
Embolism,	.	.	.	.	1	.	.	.	.	.	.	.	1
Eclampsia,	.	.	.	.	.	.	.	.	.	.	.	1	1
" puerperal,	.	.	.	.	.	.	1	.	.	.	.	.	1
Endo carditis,	.	.	1	.	.	.	1	.	.	1	.	.	3
Total,	23	32	29	34	27	25	66	64	59	40	24	43	466

MORTUARY REPORT FOR 1893.—*Continued.*

Cause of Death.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
Fever, typhoid,	1	1	.	.	2	2	2	.	6	5	6	4	29
" brain,	1	.	1	1	.	.	.	.	.	.	.	.	3
" puerperal,	.	1	.	.	.	.	.	.	.	.	.	.	1
" scarlet,	.	.	1	1	.	1	3	.	1	.	1	.	8
" rheumatic,	.	.	.	1	.	.	.	.	.	1	.	.	2
" remittent,	.	.	.	1	.	.	.	.	.	.	.	.	1
Fracture of skull,	1	.	.	.	1	.	.	1	1	1	.	.	5
Fracture of hip,	1	.	.	.	.	.	.	.	.	.	.	.	1
Gangrene, senile,	1	.	.	.	.	.	1	.	.	.	.	.	2
Gastritis,	.	.	.	.	.	.	.	.	1	.	.	.	1
Heart disease,	15	7	3	4	4	5	11	5	6	7	9	14	90
Hypertrophy of prostate gland,	.	1	.	.	.	.	.	.	.	.	.	.	1
Hydrocephalus,	.	1	.	.	.	1	.	1	.	.	.	.	3
Hemorrhage,	1	.	.	.	.	.	.	.	1	.	.	.	2
" post partem,	.	1	.	.	.	.	.	.	.	.	.	.	1
" intestinal,	.	.	1	.	.	.	.	.	.	.	.	.	1
" uterine,	.	.	.	1	.	.	.	.	.	.	.	.	1
Hepatic calculi,	.	.	1	.	.	.	.	.	.	.	.	.	1
Heart malformation,	.	.	.	1	.	.	.	.	.	.	.	.	1
Insanity, alcoholic,	1	.	.	.	.	.	.	.	.	.	.	.	1
Innutrition,	.	1	.	.	.	.	.	.	.	.	.	.	1
Influenza, (epidemic)	.	.	.	1	.	.	.	.	.	.	.	1	2
Internal strangulation of bowels,	.	.	.	.	1	.	.	.	.	.	.	.	1
Intestinal obstruction,	.	.	.	.	.	.	.	1	.	.	.	.	1
Icterus neonatorum,	.	.	.	.	.	.	.	.	.	2	.	.	2
Kidney disease,	8	3	2	5	1	4	1	4	4	1	3	2	38
Laryngismus strid.,	.	.	1	1	.	.	.	.	.	.	.	.	2
Lungs, œdema of,	.	.	1	.	.	.	.	.	.	.	.	.	1
Liver, cirrhosis of,	.	.	.	1	.	.	.	.	2	.	.	2	5
" atrophy of,	.	.	.	.	1	.	.	.	.	.	.	.	1
" disease of,	1	.	.	.	.	.	1	.	.	.	.	.	2
Laryngitis,	.	.	.	1	.	.	.	.	.	.	.	.	1
Lead poison,	.	.	.	.	.	.	.	.	1	.	.	.	1
Leucocythemia,	.	.	.	.	.	.	.	.	.	1	.	.	1
Meningitis,	1	3	2	4	1	2	4	3	4	.	3	4	31
" tubercular,	1	.	3	1	1	1	3	4	.	2	1	1	18
" cerebro-spinal,	.	.	.	.	1	.	.	2	.	2	.	.	5
Measles,	.	.	.	1	2	1	.	1	.	.	.	.	5
Mania, acute,	.	.	.	.	.	.	.	1	.	.	.	.	1
" puerperal,	.	.	.	1	.	.	.	.	.	.	.	.	1
Myelitis,	.	.	.	.	.	1	.	.	.	.	.	.	1
Old age,	2	1	2	.	1	2	.	2	.	2	1	3	16
Osteo sarcoma,	.	.	.	.	.	.	.	.	.	1	.	.	1
Total,	35	20	18	26	16	20	26	25	27	25	24	31	293

MORTUARY REPORT FOR 1893.—*Continued.*

Cause of Death.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
Pneumonia,	12	10	3	6	8	8	5	2	4	4	4	12	78
" broncho,	1	1	1	.	1	1	.	.	.	1	.	3	9
Peritonitis,	1	1	2	6	2	2	1	3	3	3	.	1	25
Phthisis, pul.,	4	5	7	8	7	11	11	9	8	4	8	11	93
Paralysis,	2	.	1	1	4	1	.	1	2	1	4	3	20
" acute bulbar,	.	1	.	.	.	.	.	.	.	.	.	.	1
Premature birth,	2	2	1	.	1	.	3	1	2	3	3	1	19
Poisoning, coal gas,	.	.	.	1	.	.	.	.	.	.	.	.	1
Pyæmia,	.	.	.	.	1	.	.	.	.	1	.	.	2
Purpura hemorrhagica,	.	.	.	.	.	.	.	.	.	1	.	1	2
Rheumatism,	.	.	.	.	.	.	.	.	1	.	.	.	1
Spinal disease,	1	.	.	.	.	.	.	.	.	.	.	.	1
Septicæmia,	3	.	.	.	.	.	2	.	.	.	.	.	5
" puerperal,	.	.	.	1	1	.	.	.	.	.	.	.	2
Syphilis,	.	.	1	1	.	.	1	.	.	.	.	.	3
Stomach, ulceration of,	.	1	.	.	.	.	.	.	.	.	.	.	1
" perforation of,	.	.	.	.	.	.	.	1	.	.	.	.	1
Suicide, cut throat,	.	.	.	.	.	.	.	1	.	.	.	.	1
" gunshot wound of brain,	.	.	.	.	.	.	.	.	.	1	.	.	1
" drowning,	.	.	.	.	.	.	.	.	.	.	1	.	1
Suffocation,	.	.	.	.	.	.	.	.	.	.	1	1	2
Spina Bifida,	.	.	.	.	.	.	.	.	.	.	.	1	1
Tumor, cerebral,	.	.	.	.	.	.	.	.	.	.	1	.	1
Tuberculosis,	.	.	2	2	2	1	3	1	1	2	3	4	21
Tuberculosis of bowels,	.	.	.	.	.	.	.	.	.	.	.	1	1
Tonsillitis,	.	.	.	.	.	.	1	.	.	.	1	.	2
Tabes Mesenterica,	.	.	.	.	.	.	.	.	.	.	.	1	1
Unknown,	.	.	1	.	2	.	.	.	.	.	1	3	7
Whooping cough,	.	1	.	1	.	.	2	.	.	1	.	3	8
Total,	26	22	19	27	29	24	29	19	21	22	26	47	311

	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
Whole number of deaths,	84	74	66	87	72	69	121	108	107	87	74	121	1070
Deaths under five years,	24	28	30	40	26	22	75	66	61	42	27	45	486
Stillborn,	5	7	7	9	6	3	9	6	11	5	5	7	80

Death rate, 17.83; estimated population being 60,000 inhabitants.

CASES OF CONTAGIOUS DISEASES.

	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
Scarlet fever,	14	8	15	16	24	45	16	4	7	24	21	28	222
Diphtheria,	4	2	2	2	.	3	3	1	1	5	1	2	26
Typhoid fever,	3	2	1	7	7	8	12	16	74	61	33	10	234
Varioloid,	2	.	.	.	.	.	.	.	.	.	.	.	2
Measles,	.	.	.	.	.	.	.	.	.	16	37	72	125
Whooping cough,	.	.	.	.	.	.	.	.	.	.	6	10	16
Total,													652

During the past year 71 vaccinations have been made by the Physician to the Board.

REPORT OF NEW BEDFORD QUARANTINE FOR 1893.

For the year 1893 boarded 23 vessels arriving from foreign ports. No vessels were detained in quarantine, as they brought no cases of contagious diseases.

W. N. SWIFT, Quarantine Officer.

ANALYSIS OF WELL WATER ON PALMER'S ISLAND.

Analysis parts in 100,000.
Date of collection, October 5, 1893.
Date of analysis, October 6, 1893.
Appearance, very slightly turbid.
Sediment, none.
Color, 0.12.
Odor, { Cold, none. / Hot, very faintly vegetable.
Total solids, 18.60.
Free ammonia, 0.000.
Albuminoid ammonia, 0.0084.
Chlorine, 3.42.
Nitrates, 0.500.
Nitrites, 0.0001.
Hardness, 7.
Oxygen consumed, 0.2002.

BLACK SPOTS GIVE THE LOCATION OF HOUSES WHERE THERE WERE CASES OF TYPHOID FEVER FOR 1893.

THERE WERE CASES OF TYPHOID FEVER FOR [illegible]

NEW DEDFORD.

Statistics of Cases of Typhoid Fever Occurring from August 1, 1893, to January 1, 1894.

Infected Houses.

Old, ... 65 | New, ... 67

Total houses infected, ... 156
Two or more cases in house, ... 28

Water Supply.

City, ... 149 | Well, ... 7

No. of 1-tenement houses infected, . . 37
No. of 2 " " " . . 67
No. of 3 " " " . . 12
No. of 4 " " " . . 6
No. of 6 " " " . . 15
No. of 8 " " " . . 3
No. of 10 " " " . . 1
No. of 12 " " " . . 1
No. of 18 " " " . . 1

Land.

High, 46 | Low, 107

Total cases, . . . 201

19 families had 2 cases.
5 families had 3 cases.
2 families had 4 cases.
2 families had 5 cases.
128 families had 1 case.

Sanit'y Condit'ns.

Good, 112 | Bad, 37

Under 15 yrs., . 59
Bet. 15 and 30, . . 85
Lived in City less than 2 yrs., . . 58
Lived in houses less than 1 yr., . 83
Out of town within 5 wks. of attack, 24
Probable external infection, . . . 6

Drainage.

Sewer, ... 128
Cesspool, ... 8
Unknown, ... 12
Privy, ... 62
Water closet, ... 76

Occupations.

Mill operatives, 7 mills, . . . 46
Laborers, (carpenters, etc.) . 24
School, ... 42
Various, ... 89

No. of houses that had cases on
First floor, ... 90
Second floor, ... 50
Third floor, ... 16

Milk Supply,

40 routes had one family among its customers.
15 routes had two families among its customers.
4 routes had three families among its customers.
2 routes had four families among its customers.
20 stores supplied about 40 families, while none of these stores had more than three families among its customers, while the milk supply of these stores was divided among nearly as many different milkmen.

Source of Supply.

Dartmouth, . . . 32 routes.
Fairhaven, . . . 8 routes.
Acushnet, ... 11 routes.
New Bedford, . . 10 routes.

Two families each had one case and then removed to a different locality and there developed two more cases.

No mill was more infected than another in proportion to the employees. Only about ten cases were among the upper-middle and upper classes, and only a small proportion among the destitute poor, as evidenced by the fact that nearly half the houses infected were among the two-tenement class.

Nearly every house which had a water closet was provided with the tank kind, there being only five or six of the old style "hopper" and "pressure" class.

That the privies and water closets were nearly equally divided.

In Board of Aldermen,
May 10, 1894.

Received, ordered printed in the City Documents, and sent down for concurrence.

D. B. LEONARD,
City Clerk.

In Common Council,
May 10, 1894.

Concurred.

WILLIAM A. MACKIE,
Clerk.

1894—CITY DOCUMENT NO. 8.

THE

AUDITOR'S ANNUAL REPORT

OF THE

Receipts and Expenditures

OF THE

CITY OF NEW BEDFORD,

INCLUDING REPORT OF

CITY TREASURER AND COLLECTOR OF TAXES,

FOR THE YEAR 1893.

NEW BEDFORD:
EVENING JOURNAL COMPANY, PRINTERS TO THE CITY.
1894.

City of New Bedford,

Auditor's Office,

March 15, 1894.

To the Honorable the City Council of New Bedford:

Gentlemen,—Herewith I have the honor to submit the Annual Report of all the Receipts and Expenditures of the city for the financial year ending on the first Monday in January, 1894, together with a statement of the city debt, a schedule of the real and personal property belonging to the city and the estimated value thereof, and such other statements as I have deemed of interest.

Yours respectfully,

GEORGE W. PARKER,

City Auditor.

AUDITOR'S REPORT.

JAMES H. HATHAWAY, ESQ., CITY TREASURER,

IN ACCOUNT WITH THE CITY OF NEW BEDFORD.

DR.

1893, January 2. To balance of cash,	$16,481.73
Appropriations, general, 1893,	638,456.31
" " 1892,	8,258.86
" " 1891,	4,077.88
" " 1890,	50.15
" " 1889,	84.26
" special, 1892,	270,000.00
Cemeteries,	6,926.90
Cemeteries, sale of lots,	555.00
Cemetery funds,	2,450.00
Com. of Mass., Chap. 279,	1,890.50
Com. of Mass., Chap. 301,	7,533.00
Court judgments,	4,448.70
Engineering department,	140.12
Fire department, printing and incidentals,	1,409.99
Free Public Library, dog fund,	1,206.39
" salaries,	250.00
" trustees of	3,728.00
Highways and streets, block paving Acushnet avenue,	888.75
" miscellaneous,	15,182.00
" private work and trimming trees,	27,379.04
Incidentals,	1,070.67
Lighting the streets, sundries,	.41
N. B. School Committee, Howland fund,	3,000.00
" " Jona. Bourne prize fund,	60.00
N. B. Water Works,	90,880.81
Parks fund,	92.50

Parks and squares,	$267.89
Permanent debt,	10,745.77
Police department,	6,784.18
Poor department, groceries,	8,972.15
Printing, binding, and stationery,	34.23
Public schools, printing and incidentals,	21.36
" dog fund,	1,206.40
Real estate tax account,	42.64
Sewers, general account,	6,758.42
" Bowditch street, No. 4,	3.30
" Davis street,	14.20
" Nye street,	39.81
" South Second street, No. 7,	186.76
" Union street, lowering of	3.40
" William street, lowering of	205.43
Sinking funds,	2,084.81
Temporary loan,	595,135.55
Unappropriated funds,	158,216.09
	$1,897,224.36

AUDITOR'S REPORT.

JAMES H. HATHAWAY, ESQ., CITY TREASURER,

IN ACCOUNT WITH THE CITY OF NEW BEDFORD.

CR.

Board of Health:	
Garbage,	$9,500.00
Incidentals,	2,151.70
Salaries,	2,871.00
Cedar Grove street school house addition,	10,474.08
Cemeteries,	13,500.77
Cemeteries, Oak Grove tomb,	3,700.44
City stable tool house and workshop,	908.42
Com. of Mass., Chap. 279,	3,180.00
" Chap. 301,	8,584.25
" Chap. 447,	2,205.89
Court judgments,	2,722.56
Engineering department,	5,216.68
Engine house No. 5 alterations,	8,125.56
Engine house No. 5 heating,	675.00
Engine house, Acushnet avenue and Davis street,	13,301.80
Engine house lot, Acushnet avenue and Davis street,	2,585.00
Fire department:	
Engine, hose, and wagon repairs,	1,899.66
Fire alarm, labor, and supplies,	4,423.09
Harnesses and repairs,	243.85
Horsekeeping, feeding, and shoeing,	5,979.03
Pay rolls and Protecting Society,	39,668.34
Printing and incidentals,	1,021.86
Purchase of horses,	250.00
Repairs of buildings,	762.99
Rents,	90.00

Salaries,	$2,250.00
Telephones,	415.00
Wood, coal, and lights,	1,948.79
Free Public Library:	
Dog fund,	1,972.05
Incandescent lights,	235.00
Salaries,	5,620.00
Subject catalogues,	423.67
Trustees of,	3,792.42
Highways and streets:	
Block paving,	2,483.73
Block paving, Acushnet avenue,	11,335.56
Cinder sidewalks and repairs,	2,477.66
City stables,	14,544.49
City tool house and workshop,	9,534.04
Cobble paving and repairs,	8,714.43
Collecting ashes,	5,999.95
Concrete sidewalks and repairs,	4,115.26
Crosswalks and repairs,	1,383.25
Curbing and repairs,	6,978.04
Filling and grading,	18,907.93
Flagging and repairs,	3,092.06
Gutters and repairs,	4,149.07
Labor, stable yard,	514.43
Macadam,	21,929.62
Main office expenses and salaries,	6,546.22
Miscellaneous,	9,226.15
Moving snow and ice,	1,779.66
Private work and trimming trees,	16,982.58
Sweeping and cleaning,	8,009.99
Incidentals,	27,667.15
" armories and military property,	470.87
" Fourth of July,	484.33
" G. A. R. posts,	600.00
Kempton street school house and lot,	41,518.40
Layout and acceptance Sears court,	13,228.00
Lighting the streets:	
Arc lights,	17,546.75
Gas lights,	9,274.17
Globe lights,	11,121.60
Incandescent lights,	443.80
Sundries,	292.47
N. B. and Fairhaven bridge,	1,939.88
N. B. School Committee, Howland fund,	3,104.73
" " Jona. Bourne prize fund,	60.00
N. B. Water Works,	102,640.96

Parks and squares,	$5,706.76
Permanent debt,	137,971.29
Pleasant street land damages,	33,135.00
Police department,	80,750.19
Police station and ward room corner of Blackmer and South Water streets,	3,379.50
Poor department:	
Burials,	988.50
Cities and towns,	922.50
Clothing and supplies,	53.45
Fuel,	3,678.04
Groceries,	9,430.12
Incidentals,	2,467.40
Salaries,	4,313.75
State hospitals,	8,317.75
Almshouse:	
Furnishing and supplies,	3,806.85
Grain and provisions,	3,926.01
Incidentals and pay rolls,	4,165.01
Printing, binding, and stationery,	7,518.37
Public schools:	
Pay of teachers,	98,791.34
Books, stationery, and supplies,	4,048.95
Dartmouth street school house,	1,192.92
Furnishing Kempton street school house,	1,300.00
I. W. Benjamin school,	346.36
Fuel,	7,042.80
Janitors,	11,452.11
Kempton street cooking school,	561.10
Lighting schools,	1,304.07
Office coal and rent,	600.06
Office salaries,	5,549.99
Printing and incidentals,	3,903.99
Repairs of buildings and furniture,	6,210.44
Repairs of heating apparatus,	1,847.53
Telephones,	128.00
Manual training school,	11.57
Dog fund,	1,095.16
Real estate tax account,	246.24
Repairs of city property,	7,519.62
Acushnet avenue school house addition,	6,950.00
Engine house No. 4 addition and alterations,	1,983.76
Fire escapes, almshouse,	1,398.75
School house, Fourth and Madison streets,	14,962.65
Drainage and ventilation of Library building,	423.86
Ward room, ward 3, precinct 5,	436.57

Salaries,	$17,643.62
Sewers:	
General account,	20,594.62
Bowditch street, No. 4,	1,796.77
Bullard street,	2,054.58
Coffin avenue,	13.36
Cove road, No. 3,	107.50
Davis street,	8,719.16
Field street,	827.73
Market and Pleasant streets,	1,141.82
Myrtle street, No. 1,	459.27
Myrtle street, No. 2,	75.48
Nye street,	3,818.01
Pope street, No. 3,	1,214.11
South First street, No. 5,	242.32
South Second street, No. 7,	476.71
South Second street, No. 8,	320.88
South Water street, No. 10,	213.86
Union street, lowering of	7,461.90
Wamsutta Village,	320.00
William street, lowering of	7,639.50
Sinking funds,	64,524.81
Temporary loan,	695,000.00
Unappropriated funds,	14,507.61
City Treasurer, balance of cash,	8,416.28
	$1,897,224.36

EXPENDITURES IN DETAIL.

APPROPRIATIONS, GENERAL, 1893.

DR.

Board of Health:	
Garbage,	$5,775.00
Incidentals,	402.19
Salaries,	2,320.31
Com. of Mass., Chap. 279,	1,829.00
" Chap. 447,	2,000.00
Fire department:	
Engine, hose, and wagon repairs,	1,897.50
Fire alarm, labor, and supplies,	1,237.50
Harnesses and repairs,	330.00
Horsekeeping, feeding, and shoeing,	4,071.75
Pay rolls and Protecting Society,	32,498.85
Printing and incidentals,	707.02
Repairs of buildings,	412.50
Rents,	82.50
Salaries,	1,856.25
Telephones,	342.38
Wood, coal, and lights,	1,113.75
Free Public Library, salaries,	4,347.75
Highways and streets:	
Cinder sidewalks and repairs,	3,300.00
City stables,	7,425.00
City tool house and workshop,	2,392.50
Cobble paving and repairs,	6,600.00
Collecting ashes,	4,950.00
Concrete sidewalks and repairs,	2,475.00
Crosswalks and repairs,	2,062.50

Curbing and repairs,	$6,187.50
Filling and grading,	13,200.00
Flagging and repairs,	2,475.00
Gutters and repairs,	4,125.00
Labor, stable yard,	577.50
Macadam,	14,850.00
Main office expenses and salaries,	5,280.00
Miscellaneous,	6,435.00
Moving snow and ice,	330.00
Private work and trimming trees,	1,650.00
Sweeping and cleaning,	6,435.00
Incidentals,	40,341.75
Lighting the streets:	
Arc lights,	13,167.00
Gas lights,	7,189.87
Globe lights,	9,830.70
Incandescent lights,	346.50
Sundries,	815.93
N. B. and Fairhaven bridge,	2,062.50
N. B. Water Works,	9,900.00
Permanent debt,	128,500.00
Pleasant street land damages,	28,875.00
Police department,	56,430.00
Poor department:	
Burials,	825.00
Cities and towns,	825.00
Clothing and supplies,	330.00
Fuel,	2,475.00
Groceries,	1,650.00
Incidentals,	1,761.37
Salaries,	4,508.63
State hospitals,	6,600.00
Almshouse:	
Furnishing and supplies,	2,062.50
Grain and provisions,	3,300.00
Incidentals and pay rolls,	2,887.50
Printing, binding, and stationery,	5,197.50
Public schools:	
Pay of teachers,	79,200.00
Books, stationery, and supplies,	3,630.00
Fuel,	4,950.00
Janitors,	9,075.00
Lighting schools,	825.00
Office coal and rent,	495.00
Office salaries,	3,630.00
Printing and incidentals,	495.00

Repairs of buildings and furniture,	$6,600.00	
Repairs of heating apparatus,	430.65	
Telephones,	105.60	
Repairs of city property,	2,062.50	
Salaries,	13,769.25	
Sewers, general account,	4,125.00	
Sinking funds,	62,440.00	$673,689.00

Cr.

By cash receipts, as per Treasurer's report,	$638,456.31	
Jan. 1, 1894. By balance,	35,232.69	$673,689.00

Dr.

Jan. 1, 1894. To balance,	$35,232.69

APPROPRIATIONS, GENERAL, 1892.

Dr.

Jan. 2, 1893. To balance,	$21,248.31

Cr.

By cash receipts, as per Treasurer's report,	$8,258.86	
Jan. 1, 1894. By balance,	12,989.45	$21,248.31

Dr.

Jan. 1, 1894. To balance,	$12,989.45

APPROPRIATIONS, GENERAL, 1891.

DR.

Jan. 2, 1893. To balance,		$9,763.26

CR.

By cash receipts, as per Treasurer's report,	$4,077.88	
Jan. 1, 1894. By balance,	5,685.38	$9,763.26

DR.

Jan. 1, 1894. To balance,	$5,685.38

APPROPRIATIONS, GENERAL, 1890.

DR.

Jan. 2, 1893. To balance,	$16,192.82

CR.

By cash receipts, as per Treasurer's report,	$50.15	
Jan. 1, 1894. By balance,	16,142.67	$16,192.82

DR.

Jan. 1, 1894. To balance,	$16,142.67

APPROPRIATIONS, GENERAL, 1889.

DR.

Jan. 2, 1893. To balance,		$13,798.13

CR.

By cash receipts, as per Treasurer's report,	$84.26	
Jan. 1, 1894. By balance,	13,713.87	$13,798.13

DR.

Jan. 1, 1894. To balance,	$13,713.87

APPROPRIATIONS, GENERAL, 1888.

DR.

Jan. 2, 1893. To balance,	$2,347.78

CR.

Jan. 1, 1894. By balance,	$2,347.78

DR.

Jan. 1, 1894. To balance,	$2,347.78

APPROPRIATIONS, SPECIAL, 1893.

DR.

Engineering department,	$5,000.00
Engine house No. 5 alterations,	1,043.13
Engine house No. 5 heating,	675.00
Engine house, Acushnet avenue and Davis street,	21,900.00
Engine house, Acushnet avenue and Davis street, heating,	1,050.00
Fire department, engine No. 5, new,	3,500.00
Free Public Library, incandescent lights,	235.00
Highways and streets:	
Block paving, Acushnet avenue,	11,274.00
City stables,	3,794.32
City tool house and workshop,	1,893.48
Cobble paving and repairs,	1,155.00
Collecting ashes,	866.25
Concrete sidewalks and repairs,	932.08
Curbing and repairs,	866.25
Filling and grading,	2,516.25
Flagging and repairs,	247.50
Macadam,	3,223.85
Main office expenses and salaries,	1,214.65
Miscellaneous,	82.50
Moving snow and ice,	57.75
Sweeping and cleaning,	1,126.12
Incidentals,	2,178.00
Incidentals, G. A. R. posts,	600.00
Kempton street school house and lot,	2,761.72
Layout and acceptance Sears court,	14,228.00
Free Public Library, subject catalogues,	1,000.00
Lighting the streets:	
Arc lights,	2,793.00
Gas lights,	1,525.13
Globe lights,	2,085.30
Incandescent lights,	73.50
Sundries,	173.07
Platting system,	17,435.00
Police department,	11,970.00
Printing, binding, and stationery,	1,102.50
Public schools, pay of teachers,	16,800.00
Acushnet avenue school house, addition and alterations,	16,990.00
Acushnet avenue school house, heating,	4,525.00
Engine house No. 4, addition and alterations,	1,250.00

Fire escapes, almshouse,	$1,530.00	
School house, Fourth and Madison streets,	40,970.00	
School house, Fourth and Madison streets, warming and ventilating,	4,600.00	
Drainage and ventilation, Library Building,	600.00	
Sewers:		
General account,	2,000.00	
Bowditch street, No. 4,	323.62	
Bullard street,	565.50	
Cove road, No. 3,	107.50	
Davis street,	6,700.00	
Field street,	840.00	
Market and Pleasant streets,	2,500.00	
Nye street,	3,379.61	
Pope street, No. 3,	3,000.00	
South First street, No. 5,	250.00	
South Second street, No. 7,	400.00	
South Second street, No. 8,	300.00	
South Water street, No. 10,	250.00	
Union street, lowering of	7,600.00	
Wamsutta Village,	320.00	
William street, lowering of	6,000.00	$242,379.58

Cr.

By incidentals,	$10,000.00	
Unappropriated funds,	54,279.67	
Jan. 1, 1894. By balance,	178,099.91	$242,379.58

Dr.

Jan. 1, 1894. To balance,	$178,099.91

APPROPRIATIONS, SPECIAL, 1892.

Dr.

Jan. 2, 1893. To balance,	$344,633.24

Cr.

By cash receipts, as per Treasurer's report,	$270,000.00	
By transfer from unappropriated funds to balance,	74,633.24	$344,633.24

BOARD OF HEALTH—GARBAGE.

Dr.

To Gammons, Edgar H.	$9,500.00

Cr.

By appropriation,	$5,775.00	
Transfer from unappropriated funds,	3,725.00	$9,500.00

BOARD OF HEALTH—INCIDENTALS.

Dr.

Anthony & Sons, E., incorp.,	$18.12
Ashley, Dr. D. C.	58.50
Ashley, Isaac L.	24.00
Ballard & Kirschbaum,	1.00
Bradley, William E.	2.00
Briggs & Lawrence,	12.75
Broadbent, Samuel S.	9.00
Brown, Manuel	117.00
Buchell Shoe House,	8.10
Cushing, C. F.	3.50
Dews, Edwin	28.71
Douglas, F. M.	30.60
Evening Journal Co.,	16.91
Firme, H. O.	62.00
Gammons, Edgar H.	9.00
Gray, Belle T.	95.79
Hart & Akin,	16.87
Hathaway, Nathaniel	25.00
Hunter, George	89.34
Inspector,	60.54
Lawton, C. H. & H. A.	19.40
Macomber, William E.	50.00
Mayo, Joseph H.	1.83
McFarlin, James	3.00
Mercury Publishing Co.,	118.43
N. B. Gas & Edison Light Co.,	.75
N. B. Tow Boat Co.,	70.00

Paine & Bro., S. S.	.50	
Peckham, Samuel W.	53.00	
Peed, Thomas J.	216.00	
Peirce, H. S.	62.90	
Pierce, Dr. A. M.	10.00	
Pratt, Dr. Charles A.	156.00	
Prescott, Dr. C. D.	15.00	
Reynolds, E. G.	34.50	
Richards, George D.	.60	
Richardson, Louis H.	.54	
Sanders & Barrows,	122.15	
Santos, Mary	6.00	
So. Mass. Telephone Co.,	38.07	
Sullivan, D. J.	.75	
Swift, Dr. William N.	431.00	
Taber, Robert W.	1.35	
Tug Volunteer,	35.00	
Waite, Dr. E. E.	10.50	
Wright Drug Co.,	5 70	$2,151.70
Transfer to balance,		72.86
		$2,224.56

Cr.

By appropriation,	$402.19	
Unappropriated funds,	1,711.65	
Incidentals.	110.72	$2,224.56

BOARD OF HEALTH—SALARIES.

Dr.

Police department, William E. Macomber,	$971.00	
Richardson, Louis H.	1,400.00	
Small, Susie J.	500.00	$2,871.00

Cr.

By appropriation,	$2,320.31	
Unappropriated funds,	492.19	
Transfer to balance,	58.50	$2,871.00

CEDAR GROVE STREET SCHOOL HOUSE ADDITION.

Dr.

Anthony, & Sons, E., incorp.,	$1.60	
Duffy, Thomas	50.00	
Evening Journal Co.,	1.93	
Fuller & Warren Warming and Ventilating Co.,	1,327.50	
Hammond & Son, C.	1,025.00	
Hart & Akin,	31.00	
Mercury Pub. Co.,	1.55	
Miller & Hook,	8,035.50	$10,474.08

Cr.

Jan. 2, 1893. By balance,	$8,816.95	
Incidentals,	196.63	
Unappropriated funds,	1,460.50	$10,474.08

CEMETERIES.

Dr.

Pay-Rolls:

Oak Grove Cemetery,	$3,160.82	
Pine Grove Cemetery,	13.03	
Rural Cemetery,	3,402.28	$6,576.13

Salaries:

Cornell, C. F., sexton,	$1,000.00	
Eldridge, R. S., sexton,	354.38	
Waterson, Samuel F., sexton,	228.30	
Haskell, E. S., Supt. Burial Grounds,	115.02	
Peirce, S. D., Supt. Burial Grounds,	57.16	1,754.86

Sundries:

Almy & Hitch,	$12.00	
Anthony & Sons, E., incorp.,	6.29	
Beeden, Benjamin M.	4.76	
Borden, H. T.	1.20	
Breck & Sons, John	2.97	
Briggs & Lawrence,	31.60	
Brightman, Charles O.	306.25	

Brown, William S.	38.21
Butts, C. H. W.	83.05
Cable Rubber Co.,	54.47
Case, A. H.	12.95
Central Union Association,	2.67
Corson, T. S.	300.00
Davis, Edward G.	241.53
Davis, Z. B.	6.80
Denison Bros. Co.,	58.00
DeWolf & Vincent,	61.48
Dews, Edwin	13.70
Drake, A. B.	16.00
Dunn, John	15.75
Eggars, S.	2.25
Enos, Joseph	8.25
Evening Journal Co.,	4.07
Farnham, H. C.	2.00
Goodell, L. W.	37.80
Handy, Jona.	9.28
Harrington, Michael F.	207.17
Hart & Co., T. M.	32.87
Haskins, H. K.	15.79
Hathaway, A. B.	18.00
Hathaway, D. L.	21.18
Hathaway & Tobey,	15.00
Hayes, N. P.	71.18
Hersom & Co., Thomas	38.75
Hickey, M. A.	97.92
Highways and streets, miscellaneous,	162.98
Hillman, Washburn & Co.,	8.77
Holmes, D. W.	85.92
Jenney & Buffington,	4.95
Jenney & Son, P. P.	3.85
Karcher, Herman	5.20
Kirk, J. F.	3.63
Lawton, C. H. & H. A.	2.98
Lawton, Russell S.	87.20
Lowe, S. C.	2.85
Lowe, W. A.	31.50
Manchester, F. W.	80.00
Manchester, J. W.	647.30
McCarty, Mortimer	26.25
McCue, John	162.25
Mercury Pub. Co.,	61.95
Morse, Henry A.	5.00

Mosher, E. D.	22.35	
Neagus, Mrs. Charles R.	32.43	
N. B. Cordage Co.,	.27	
N. B. Water Works,	13.11	
N. Y., N. H. & H. Railroad Co.,	.40	
Paisler, Charles S.	12.60	
Peirce, Charles E.	6.30	
Pierce, E. H.	2.64	
Perkins & Chase,	3.25	
Perry & Son, S. F.	3.00	
Potter, E. L.	1.55	
Richards, George D.	1.30	
Sawin, A. K. P.	10.00	
Searles, Mortimer	2.75	
Skiff, Andrew J.	5.56	
So. Mass. Telephone Co.,	79.64	
Springer, A. R.	23.86	
Sullivan, D. J.	2.00	
Sullivan, M. H.	6.95	
Sylvia, Manuel L.	90.00	
Sylvia & Alexandria,	542.13	
Taylor & Son, H. J.	16.55	
Terry, E. & K. C.	27.72	
Thorpe, Joseph	28.00	
Tripp, Thomas B.	17.82	
Union Street Railway Co.,	19.10	
Warren, David	176.50	
West, William R.	54.63	
Whiteside, John	49.00	
Wilbur, S. S.	12.50	
Wilbur, S. B.	8.25	
Williams, William	166.72	
Wood, Brightman & Co.,	140.39	
Woodhouse, R. H.	314.74	
Woodhouse, William,	42.00	5,169.78
		$13,500.77

CR.

Jan. 2, 1893. By balance,	$1,350.81	
Cash receipts, as per Treasurer's report,	6,926.90	
Transfer from unappropriated funds,	4,951.54	
Transfer to balance,	271.52	$13,500.77

CEMETERIES—SALE OF LOTS.

Cr.

By cash receipts, as per Treasurer's report,	$555.00

CEMETERIES—OAK GROVE TOMB.

Dr.

Z. B. Davis,	$3,645.75	
S. C. Hunt,	54.69	$3,700.44

Cr.

Jan. 2, 1893. By balance,	$3,453.15	
Transfer from unappropriated funds,	247.29	$3,700.44

CEMETERY FUNDS.

Cr.

Jan. 2, 1893. By balance,	$21,644.93	
Cash receipts, as per Treasurer's report,	2,450.00	$24,094.93

CITY STABLE TOOL HOUSE AND WORKSHOP.

Dr.

Hunt, S. C.	$13.42	
Jordan, Patrick	895.00	$908.42

Cr.

Jan. 2, 1893. By balance,	$815.64	
Transfer from unappropriated funds,	92.78	$908.42

COMMONWEALTH OF MASSACHUSETTS.

Chapter 279.

Dr.

Jan. 2, 1893. To balance,	$1,829.97	
Amount paid by city for State aid,	3,180.00	$5,009.97

Cr.

By appropriation,	$1,829.00	
Cash receipts, as per Treasurer's report,	1,890.50	
Jan. 1, 1894. By balance,	1,290.47	$5,009.97

Dr.

Jan. 1, 1894. To balance,	$1,290.47

COMMONWEALTH OF MASSACHUSETTS.

Chapter 301.

Dr.

Jan. 2, 1893. To balance,	$7,281.05	
Amount paid by city for State aid,	8,584.25	$15,865.30

Cr.

By cash receipts, as per Treasurer's report,	$7,533.00	
Jan. 1, 1894. By balance,	8,332.30	$15,865.30

Dr.

Jan. 1, 1894. To balance,	$8,332.30

COMMONWEALTH OF MASSACHUSETTS.

Chapter 447 of 1890.

Dr.

Jan. 2, 1893. To balance,	$233.00	
Amount paid by city for State aid,	2,205.89	$2,438.89

Cr.

By appropriation,	$2,000.00	
Transfer to balance,	438.89	$2,438.89

COURT JUDGMENTS.

Dr.

Jan. 2, 1893. To balance,	$10,397.80	
E. L. Barney, attorney,	772.56	
Wellington Bucklin,	500.00	
William M. Butler, attorney,	150.00	
James L. Gillingham,	50.00	
Mayhew R. Hitch,	100.00	
National Bank of Commerce,	300.00	
Frank Silva,	300.00	
Alvin F. Waite et als.,	550.00	$13,120.36

Cr.

By cash receipts, as per Treasurer's report,	$4,448.70	
Transfer to balance,	8,671.66	$13,120.36

ENGINEERING DEPARTMENT.

Dr.

Williams, W. F., City Land Surveyor,	$1,769.73	
Pay-rolls,	2,182.63	
Bowker & Tripp,	9.30	
Brightman & Washburn,	5.33	
Buff & Berger,	6.60	
Church & Hammond,	.25	
Dews, Edwin	24.72	
Drake, A. B.	33.50	
Frost & Adams,	64.47	
Gage, J. N.	.30	
Greene & Wood,	8.18	
Hart & Akin,	1.00	
Hayes, N. P.	.38	
Highways and streets, miscellaneous,	887.88	
Hutchinson & Co., H. S.	6.05	
Jay, Charles F.	3.75	
Jenney & Son, P. P.	3.02	
Keuffel & Esser Co.,	5.71	
Kirby & Hicks,	13.50	
Lawrence, Joseph H.	3.00	
Library Bureau,	4.25	
Mercury Pub. Co.,	5.75	
Moody, James E.	14.65	
Murkland, James H.	17.25	
Sherman, William H.	2.00	
So. Mass. Telephone Co.,	17.01	
Union Street Railway Co.,	125.00	
Washburn, Lettice R.	1.85	
Williams, W. F.	2.00	
Wing, C. F.	.75	
Wood, Brightman & Co.,	3.20	
Wright Drug Co.,	.75	$5,223.76

Cr.

By special appropriation,	$5,000.00	
Cash receipts, as per Treasurer's report,	140.12	
Transfer to balance,	83.64	$5,223.76

ENGINE HOUSE No. 5 ALTERATIONS.

DR.

Faunce & Johnson,	$287.00	
Kern & Wright,	11.95	
Hayes' Hose Elevator Co.,	50.00	
Hunt, S. C.	112.42	
Lowe, S. C.	6.42	
Miller & Hook,	7,655.57	
Underwood, John A.	2.20	$8,125.56

CR.

Jan. 2, 1893. By balance,	$6,901.91	
Special appropriation,	1,043.13	
Transfer from unappropriated funds,	180.52	$8,125.56

ENGINE HOUSE No. 5, HEATING.

DR.

N. B. Boiler & Machine Co.,	$675.00	$675.00

CR.

By special appropriation,	$675.00

ENGINE HOUSE, ACUSHNET AVENUE AND DAVIS STREET.

Dr.

N. B. Water Works,	$9.60	
Paisler, C. S.	13.00	
Sullivan, John B.	13,279.20	
Jan. 1, 1894. To balance,	8,598.20	$21,900.00

Cr.

By special appropriation,	$21,900.00

Cr.

Jan. 1, 1894. By balance,	$8,598.20

ENGINE HOUSE, ACUSHNET AVENUE AND DAVIS STREET, HEATING.

Dr.

Jan. 1, 1894. To balance,	$1,050.00

Cr.

By special appropriation,	$1,050.00

Cr.

Jan. 1, 1894. By balance,	$1,050.00

FIRE DEPARTMENT—ENGINE No. 5, NEW.

Dr.

Jan. 1, 1894. To balance,	$3,500.00

Cr.

By special appropriation,	$3,500.00

Cr.

Jan. 1, 1894. By balance,	$3,500.00

FIRE DEPARTMENT — ENGINE, HOSE, WAGON REPAIRS, AND EXTINGUISHERS AND CHARGES.

Dr.

American Tube Works,	$33.70	
Brownell, George L.	69.77	
Brownell, Ashley & Co.,	195.60	
Callahan Co., Cornelius	757.50	
DeWolf & Vincent,	20.65	
Durfee, E. M.	84.30	
Fichtenmeyer & Flynn,	202.66	
Footman, John W.	19.50	
Hatch & Co.,	1.85	
Hathaway, H. C.	186.44	
Hathaway, L. J.	120.90	
Highways and streets, miscellaneous,	1.00	
Lowell, Clarence	28.15	
Macy, E. B.	.90	
Manchester Locomotive Works,	1.75	
N. B. Boiler & Machine Co.,	134.85	
Peckham, I. H.	6.50	
Pope's Island Manufacturing Co.,	3.24	
Sargent, F. H.	27.35	
Washburn, William H.	3.05	$1,899.66
To transfer to balance,		400.34
		$2,300.00

Cr.

By appropriation,	$1,897.50	
Transfer from unappropriated funds,	402.50	$2,300.00

FIRE DEPARTMENT — FIRE ALARM, LABOR, AND SUPPLIES.

DR.

Acushnet Iron Co.,	$4.51
Alexander, Joseph	18.50
Baylies, John B.	20.75
Beattie Zinc Works,	96.30
Bird & Co., J. A. & W.	174.58
Briggs, D. D.	14.73
Briggs & Lawrence,	153.68
Callahan Co., Cornelius	1,478.10
Cannavan, J. W.	60.00
Cobb, George A.	4.30
Crapo, George M.	74.09
Cushing, C. F.	1.00
DeWolf & Vincent,	36.72
Dietz & Co., R. E.	30.00
Donaghy, Thomas	25.40
Driscol, Church & Hall,	36.55
Footman, John W.	1.25
Fox, James	30.00
Gardner & Southwick,	68.28
Glaister Manufacturing Co.,	4.50
Gray, Charles A.	1.69
Graham & Co., J. H.	18.00
Greene & Wood,	33.01
Hammond, Oscar S.	40.00
Handy, Jona.	1.51
Hart & Co., T. M.	42.60
Hart & Akin,	.75
Haskins, James L.	40.00
Hatch & Co.,	3.40
Hatch, R. A.	32.00
Hayes, N. P.	38.50
Highways and streets, miscellaneous,	155.00
Hill, Clarke & Co.,	300.00
Hillman, Washburn & Co.,	47.64
Homer, George S.	9.50
Howland, D. W.	39.40
Jenney & Son, P. P.	.90
Lewis, Frank	2.00
Lowe, S. C.	8.10
Macy, E. B.	114.08
Macy, Frederick	18.00

Maine, H. M.	$9.17	
Marston & Converse,	175.73	
Municipal Fire Alarm & Police Telegraph Co.,	300.00	
N. B. Boiler & Machine Co.,	15.12	
N. B. Copper Co.,	11.80	
N. B. Cordage Co.,	7.02	
N. B. Gas & Edison Light Co.,	5.92	
N. E. Gamewell Co.,	12.00	
N. B. Water Works,	17.76	
Pierce, E. H.	9.00	
Pope's Island Manufacturing Co.,	15.93	
Purrington, Brown & Richards,	15.57	
Reed, Eli W.	5.00	
Richards, George D.	12.87	
Russell, Jr., Allen	9.10	
Sherman & Son, C. R.	5.40	
Slocum, F. R.	26.63	
So. Mass. Telephone Co.,	4.05	
Sowle & Co., F. L.	5.03	
Swan, Edward	1.00	
Sylvia, Benjamin	2.00	
Sylvia, Joseph L.	18.50	
Taber, R. H.	1.00	
Taylor, George S.	9.00	
Taylor & Son, H. J.	291.22	
Tripp, S. A.	15.33	
Wamsutta Mills,	15.00	
Washburn & Moen Manufacturing Co.,	43.16	
Watkins, James B.	3.60	
Whiting & Co., E. B.	34.96	
Williams, John S.	25.00	
Wing, C. F.	10.60	
Wood, Brightman & Co.,	.75	
Wright Drug Co.,	9.55	$4,423.09

CR.

By appropriation,	$1,237.50	
Transfer from fire department, printing and incidentals,	132.51	
Transfer from unappropriated funds,	2,846.40	
Transfer to balance,	206.68	$4,423.09

FIRE DEPARTMENT—HARNESSES AND REPAIRS.

Dr.

Allen, Jesse	$10.60	
Callahan Co., Cornelius	30.00	
Chadwick, H. E.	24.00	
Cronin, William	99.10	
Cushing, C. F.	15.75	
Durfee, E. M.	.65	
Healey, T. F.	19.55	
Huddy, G. G.	15.95	
Macy, E. B.	3.25	
Williams, Joseph	25.00	$243.85
To transfer to balance,		156.15
		$400.00

Cr.

By appropriation,	$330.00	
Transfer from unappropriated funds,	70.00	$400.00

FIRE DEPARTMENT — HORSEKEEPING, FEEDING, AND SHOEING.

DR.

Bancroft, J. V.	$224.00
Bates, Lot B.	3.20
Baylies, William	542.80
Brayton, George H.	251.39
Brightman, William P.	99.00
Brownell, Ashley & Co.,	77.37
Caswell, N. H.	41.95
Clark, Thomas G.	37.54
Cornell, Pardon	267.06
Corson, T. S.	165.00
Crapo, Humphrey R.	5.76
Crapo, Peter	1.25
Daniels, Dr. A. C.	20.00
Davis, Richard	6.04
Denison Bros. Co.,	501.95
Duff & Son, David	102.73
Dunlap, A. A.	90.00
Durfee, E. M.	145.57
Enos, E. E.	5.85
Enos, Joseph	128.50
Fichtenmeyer & Flynn,	83.98
Footman, John W.	47.48
Hathaway, A. E.	213.80
Hathaway, W. E.	13.00
Highways and streets, miscellaneous,	485.24
Kenyon, Henry W.	99.00
Kelley, Charles S.	166.04
Kirk, John	133.96
Kirk, J. Frank	157.21
Lawton, C. H. & H. A.	1.55
Macy, Frederick	300.93
Macy, Josiah	176.40
Manchester, Isaac H.	120.75
Notter, John	29.14
Poor department,	625.90
Potter, D. H.	155.40
Sheehan, Timothy	124.25
Stanbridge, H. C.	6.65
Stetson, E. C.	57.24

Tinkham, F.	$159.50	
Veiera, John	56.20	
Warren, David	35.00	
Wright Drug Co.,	13.45	$5,979.03

Cr.

By appropriation,	$4,071.75	
Transfer from unappropriated funds,	863.61	
Transfer to balance,	1,043.67	$5,979.03

FIRE DEPARTMENT—PAY-ROLLS AND PROTECTING SOCIETY.

Dr.

Permanent men,	$25,003.69	
Engine companies,	14,514.65	
Protecting Society,	150.00	$39,668.34

Cr.

By appropriation,	$32,498.85	
Transfer from unappropriated funds,	6,893.69	
Transfer to balance,	275.80	$39,668.34

FIRE DEPARTMENT—PRINTING AND INCIDENTALS.

DR.

Anthony & Sons, E., incorp.,	$42.00	
Ashley, Isaac L.	14.00	
Baker, J. W.	1.25	
Briggs & Lawrence,	54.50	
Brown, William S.	27.25	
Cobb, George A.	.55	
Cranston, O. W.	10.00	
DeWolf & Vincent,	1.05	
Dews, Edwin	26.98	
Duddy, James	11.00	
Duff & Son, David	18.52	
Footman, John W.	.50	
Gray, Charles A.	20.76	
Hart & Akin,	2.25	
Hatch & Co.,	7.40	
Jay, James A.	3.00	
Lowe, S. C.	.85	
Macy, E. B.	.80	
Macy, Frederick	56.42	
Mercury Publishing Co.,	38.75	
N. B. Cordage Co.,	1.26	
N. B. Gas & Edison Light Co.,	5.53	
N. B. Ice Co.,	25.63	
N. Y., N. H. & H. Railroad Co.,	56.00	
Old Colony Railroad Co.,	56.00	
Perry & Son, S. F.	8.50	
Reynolds, E. G.	11.00	
Russell, Jr., Pardon	31.75	
Sherman, William H.	4.00	
Sowle & Co., F. L.	1.78	
Taylor & Son, H. J.	69.58	
Thomas, George	13.40	
Wing, C. F.	399.60	$1,021.86
To transfer from fire department, fire alarm, etc.,		132.51
Transfer to balance,		1,112.62
		$2,266.99

CR.

By appropriation,	$707.02	
Cash receipts, as per Treasurer's report,	1,409.99	
Transfer from unappropriated funds,	149.98	$2,266.99

FIRE DEPARTMENT—PURCHASE OF HORSES.

DR.

Douglass, J. O.	$250.00

CR.

By transfer from incidental account,	$250.00

FIRE DEPARTMENT—REPAIRS OF BUILDINGS.

DR.

Allen & Son, R. N.	$6.66	
American Tube Works,	33.30	
Ballou, Jason L.	45.92	
Faunce & Johnson,	22.35	
Gardner & Southwick,	5.89	
Greene, Marshall S.	10.63	
Greene & Wood,	103.63	
Hammond, Francis W.	48.75	
Hart & Akin,	23.96	
Hickey, M. A.	3.93	
Holmes, D. W.	1.38	
Lowe, S. C.	68.92	
Macy, E. B.	20.51	
Mahoney, T. E.	12.20	
Millotte, Napoleon	6.94	
Moriarty, T. J.	26.92	
N. B. Boiler & Machine Co.,	31.31	
N. B. Gas & Edison Light Co.,	133.34	
Payan, J. Z.	10.50	
Paisler, C. S.	1.05	
Penney, E. F.	67.41	
Washburn, F. P.	14.80	
Washburn, William H.	20.49	
West, William R.	25.40	
Wilson, D. W.	16.80	$762.99

CR.

By appropriation,	$412.50	
Transfer from unappropriated funds,	120.13	
Transfer to balance,	230.36	$762.99

FIRE DEPARTMENT—RENTS.

DR.

Brownell, Heirs of Joseph	$90.00	
To transfer to balance,	10.00	$100.00

CR.

By appropriation,	$82.50	
Transfer from unappropriated funds,	17.50	$100.00

FIRE DEPARTMENT—SALARIES.

DR.

Frederick Macy, chief engineer,	$1,000.00	
Loring T. Parlow, first assistant engineer,	300.00	
Pliny B. Sherman, second assistant engineer,	250.00	
Samuel C. France, third assistant engineer,	250.00	
George M. Crapo, fourth assistant engineer,	250.00	
Luther G. Hewins, clerk,	200.00	$2,250.00

CR.

By appropriation,	$1,856.25	
Transfer from unappropriated funds,	393.75	$2,250.00

FIRE DEPARTMENT—TELEPHONES.

DR.

So. Mass. Telephone Co.,		$415.00

CR.

By appropriation,	$342.38	
Transfer from unappropriated funds,	72.62	$415.00

FIRE DEPARTMENT — WOOD, COAL, AND LIGHTS.

DR.

Corson, T. S.	$710.93	
Denison Bros. Co.,	2.00	
Driscol, Church & Hall,	40.37	
Hart & Akin,	318.83	
Marston & Co., F. A.	167.48	
N. B. Gas & Edison Light Co.,	706.68	
Notter, John	2.50	$1,948.79

CR.

By appropriation,	$1,113.75	
Transfer from unappropriated funds,	670.39	
Transfer to balance,	164.65	$1,948.79

FREE PUBLIC LIBRARY—DOG FUND.

Dr.

Almy & Milne,	$6.00	
Ames, Y. W.	684.00	
Anthony & Sons, E., incorp.,	43.38	
Belcher & Co., W. M.	13.25	
Bradish & Co., J. Q.	9.34	
Briggs & Lawrence,	59.71	
Carter, Rice & Co.,	89.10	
Chicago Inter-Ocean,	2.00	
Daily Gazette, Taunton,	4.76	
Delano, F. E.	196.53	
DeWolf, Anna M.	11.50	
Dews, Edwin	196.43	
Ellis, Leonard B.	7.50	
Evening Journal Co.,	7.54	
Gammons, Susie H.	16.50	
Gammons, Lottie M.	69.00	
Goss, F. B. & F.	2.00	
Headley & Reed,	16.50	
Kingman, Gilbert D.	7.75	
Library Bureau,	35.50	
McAuliffe, D. J.	76.00	
Mercury Publishing Co.,	151.54	
Merrick, Emma J.	205.00	
National Binder Co.,	6.25	
News & Courier, Charleston, N. C.,	8.00	
Nicholson & Co.,	9.25	
Providence Journal Co.,	7.12	
Roffe & Co., A. H.	4.50	
San Francisco Chronicle,	9.30	
Storrs & Bement Co.,	6.80	
Weekly News, Woodville, N. H.,	7.50	
Women's Journal,	2.50	$1,972.05

Cr.

Jan. 2, 1893. By balance,	$693.42	
Cash receipts, as per Treasurer's report,	1,206.39	
Transfer to balance,	72.24	$1,972.05

FREE PUBLIC LIBRARY — INCANDESCENT LIGHTS.

Dr.

N. B. Gas & Edison Light Co.,	$235.00

Cr.

By special appropriation,	$235.00

FREE PUBLIC LIBRARY—SALARIES.

Dr.

R. C. Ingraham, librarian,	$2,250.00	
W. L. R. Gifford, assistant librarian,	1,500.00	
Mary E. Brown, assistant,	540.00	
Susie H. Gammons, assistant,	540.00	
Josephine A. Merrick, assistant,	540.00	$5,370.00

Cr.

By appropriation,	$4,347.75	
Transfer from unappropriated funds,	1,022.25	$5,370.00

FREE PUBLIC LIBRARY — SUBJECT CATALOGUES.

Dr.

Briggs & Lawrence,	$22.00	
Library Bureau,	145.67	
Russell, Clara C.	256.00	$423.67
Jan. 1, 1894. To balance,		576.33
		$1,000.00

Cr.

By transfer from incidentals,	$1,000.00

Cr.

Jan. 1, 1894. By balance,	$576.33

FREE PUBLIC LIBRARY — TRUSTEES.

(INCOME DERIVED FROM TRUST FUNDS.)

DR.

Academy of Natural Sciences,	$5.00
American Journal of Philology,	3.00
Anthony & Sons, E., incorp.,	6.00
Appleton & Co., D.	24.00
Bancroft-Whitney Co.,	24.00
Boston Public Library,	1.50
Boston Society of Natural History,	3.00
Cadby, John W.	48.13
Campbell, William J.	33.45
Columbia Pub. Co.,	5.00
Columbian University,	1.50
Commissioner of Patents,	31.20
Cupples & Co., J. G.	2.50
City Treasurer,	129.44
Davenport, A. H.	35.00
Dews, Edwin	454.38
Ellis, George H.	2.00
Ellis, L. B.	12.00
Egypt exploration fund,	10.00
Essex Institute,	4.50
Evening Journal Co.,	5.00
Folger, Mrs. William C.	2.07
Francis, David G.	11.71
Gately & Co., E.	4.00
Gifford, Fred. S.	50.00
Guild & Co., W. H.	302.94
Haferkon, H. E.	3.35
Harper, Francis T.	3.15
Harvard Graduates' Magazine,	1.00
Houghton, Mifflin & Co.,	28.50
Humphrey, George W.	3.30
Hutchinson & Co., H. S.	682.75
Kirschbaum, William G.	412.00
Lasher, George F.	2.50
Library Bureau,	84.00
Little, Brown & Co.,	359.82
Littlefield, George E.	198.82
Lowdermilk & Co., W. H.	5.00
Macomber, P. A.	2.50

Mason & Co., D.	$8.67	
Mass. Historical Society,	3.00	
Mercury Pub. Co.,	6.00	
Miller, Samuel E.	6.10	
Munsell's Sons, Joel	4.50	
New England Magazine,	3.00	
Phillips, George R.	3.00	
Publishers' Weekly,	8.32	
Roberts, S. Raymond, treasurer,	30.00	
Roffe & Co., A. H.	49.90	
Rider, Sidney S., agent,	15.75	
Sampson, Murdock & Co.,	6.00	
Schoenhoff, Carl	67.48	
Skinner, John	1.75	
Taber, Robert W.	493.88	
Tilley, R. J.	2.00	
Tirrell, Allen T.	3.87	
University of Pennsylvania Press,	2.00	
Waldron, C. D.	16.00	
Yorston Bros.,	60.00	
Zahm & Co., S. H.	3.19	$3,792.42
Jan. 1, 1894. To balance,		3,533.94
		$7,326.36

Cr.

Jan. 2, 1893. By balance,	$3,598.36	
Cash receipts, as per Treasurer's report,	3,728.00	$7,326.36

Cr.

Jan. 1, 1894. By balance,	$3,533.94

HIGHWAYS AND STREETS — BLOCK PAVING.

DR.

Pay-rolls,	$338.75	
SUPPLIES:		
Brown & Freeman,	1,905.85	
N. B. Towboat Co.,	4.00	
No. Fish Island Wharf,	154.70	
Perkins & Chase,	79.00	
Western Union Telegraph Co.,	1.43	$2,483.73
To transfer to balance,		216.27
		$2,700.00

CR.

By transfer from highways and streets, private work and trimming trees,	$2,700.0

HIGHWAYS AND STREETS — BLOCK PAVING, ACUSHNET AVENUE.

DR.

Pay-rolls,	$2,447.98	
SUPPLIES:		
Brown & Freeman,	8,289.75	
Hicks, William H.	6.00	
McCue, John	1.09	
Paisler, C. S.	2.74	
Perkins & Chase,	432.75	
Sherman, James L.	155.25	$11,335.56
To transfer to balance,		827.19
		$12,162.75

CR.

By special appropriations,	$11,274.00	
Cash receipts, as per Treasurer's report,	888.75	$12,162.75

HIGHWAYS AND STREETS — CINDER SIDEWALKS.

Dr.

Pay-rolls,	$2,444.68	
Supplies:		
Pauchly, Joseph	32.98	$2,477.66
To transfer to highways and streets, City stables,		86.29
" " " City tool house,		103.56
" " filling and grading,		261.71
" to balance,		370.78
		$3,300.00

Cr.

By appropriation,	$3,300.00

HIGHWAYS AND STREETS—CITY STABLES.

DR.

Pay-rolls,	$4.728.52
SUPPLIES:	
Alden, Seth	57.00
Allen & Son, A. W.	46.90
Ashley, Dr. D. C.	17.75
Ballard & Kirschbaum,	2.00
Bancroft, J. V.	9.75
Baylies, William	1,927.55
Blossom, E.	113.15
Brightman Bros.	3.60
Brown, H. G.	5.00
Brown, William S.	17.28
Brownell, Ashley & Co.,	228.00
Burgess, J. M.	24.00
Coggeshall, Charles W.	2.90
Coggeshall, Maxfield & Co.,	9.36
Cook, D. H.	4.65
Corson, T. S.	2.00
Couet, A. L.	.75
Cronin, William	202.28
Cummings, C. S. & B.	.50
Cushing, C. F.	226.70
Daniels, Dr. A. C.	24.00
Denison Bros. Co.	4,032.97
Dews, Edwin	9.78
Dews, Dr. H. H.	44.50
Drake, A. B.	50.00
Driscol, Church & Hall,	22.26
Duff & Son, D.	131.86
Dunlap, A. A.	1.00
Dwelley, William H.	198.27
Fuller, N. T.	11.50
Gage, J. N.	18.90
Hart & Co., T. M.	17.96
Hatch & Co.,	1.00
Hathaway, A. E.	47.23
Hathaway, L. J.	84.11
Hathaway, W. E.	649.84
Hayes, N. P.	8.65
Hersom & Co., Thomas	11.00
Howard Watch & Clock Co.,	200.42
Jay, James A.	58.25

Jenkins, B. S.	$ .55	
Jenney & Son, P. P.	61.95	
Mandell, S. G.	8.00	
Mendall, S. C.	318.64	
N. B. Cordage Co.,	.25	
N. B. Gas & Edison Light Co.,	178.52	
N. B. Harness Factory,	44.82	
Parks and Squares,	.75	
Perkins & Chase,	24.25	
Purrington, Brown & Richards,	9.20	
Richards, George D.	3.25	
Roatch & Barrett,	.76	
Russell, John A.	5.40	
Russell, Pardon	19.80	
Sewers, general	42.50	
Sewers, Nye street	2.23	
Sewers, Union street,	1.00	
Scollay & Rich,	5.00	
Sherman, George C.	10.98	
Smith, Benjamin T.	335.28	
Smith & Goold,	9.00	
So. Mass. Telephone Co.,	70.00	
Sowle & Co., F. L.	10.71	
Sullivan, D. J.	1.00	
Taber, R. W.	2.75	
Watkins, James B.	5.80	
Wells, Dr. H. B.	70.00	
Whiteside, John	3.00	
Wilson, William P.	19.68	
Wood, Brightman & Co.,	24.78	
Wright Drug Co.,	1.50	$14,544.49

Cr.

By appropriation,	$7,425.00	
Special appropriation,	3,794.32	
Transfer from highways and streets, cinder sidewalks and repairs,	86.29	
Transfer from highways and streets, curbing and repairs,	338.70	
Transfer from highways and streets, miscellaneous,	1,713.77	
Transfer from highways and streets, private work and trimming trees,	421.92	
Transfer to balance,	764.49	$14,544.49

HIGHWAYS AND STREETS — CITY TOOL HOUSE AND WORKSHOP.

Dr.

Pay-rolls,	$6,981.04
Supplies:	
Allen, A. W.	136.62
Allen & Son, A. W.	1.60
Babbitt, Wood & Co.,	24.15
Brightman Bros.,	3.20
Brownell & Co.,	4.48
Coleman Nail Co.,	10.25
Cronin, William,	22.30
Cushing, C. F.	1.95
DeWolf & Vincent,	5.00
Duff, David	38.29
Duff & Son, David	121.98
Fairbanks, Morse & Co.,	29.75
Greene & Wood,	63.25
Hamlin, James	26.04
Handy, Jona.	387.48
Hart & Akin,	14.09
Hathaway, H. W.	38.10
Hathaway, L. J.	68.56
Hayes, N. P.	533.33
Ingersoll-Sargent Drill Co.,	3.00
Jenkins, B. S.	19.15
Kirby, Jr., & Co., George	130.86
Lowell, Clarence	10.15
Luscomb Machine Co., F. W.	1.50
N. B. Cordage Co.,	8.66
N. B. Boiler & Machine Co.,	3.22
N. B. Gas & Edison Light Co.,	117.00
Notter, John	2.00
Old Colony Railroad Co.,	.68
Parks and squares,	2.90
Peirce, J. Henry	9.75
Perkins & Chase,	5.25
Pierce, E. H.	1.55
Poole, P. S.	23.28
Purrington, Brown & Richards,	.55
Reed, Anson A.	2.50
Russell, John A.	20.67
Russell, Pardon	10.50

Sampson, George H.	$9.00	
Sawyer, S. P.	2.25	
Searell, William E.	4.90	
Sewers, general,	15.55	
Sewers, Davis street,	3.33	
Sherman, James L.	225.24	
Smith-Carleton Iron Co.,	37.00	
Sowle & Co., F. L.	210.60	
Sowle, Nat. P.	17.15	
Swan, Edward	3.00	
Terry, E. & K. C.	53.20	
Tillinghast, William A.	3.12	
Wamsutta Mills,	50.49	
Wood, Brightman & Co.,	14.58	$9,534.04

Cr.

By appropriation,	$2,392.50	
Special appropriation,	1,893.48	
Transfer from highways and streets, cinder sidewalks and repairs,	103.56	
Transfer from highways and streets, macadam,	172.08	
Transfer from highways and streets, miscellaneous,	438.45	
Transfer from highways and streets, private work and trimming trees,	4,091.15	
Transfer to balance,	442.82	$9,534.04

HIGHWAYS AND STREETS — COBBLE PAVING AND REPAIRS.

Dr.

Pay-rolls,	$5,906.92	
Supplies:		
Block paving, Acushnet avenue,	883.95	
Delano, Arthur	24.71	
Duddy, James	3.48	
Enos, Joseph	3.62	
Grew, David, Jr.,	5.50	
Haskell, Isaac F.	17.50	
Holland, John	60.46	
Manchester, John W.	30.29	
McCabe, John	8.69	
McCarty, M. M.	13.34	
McCrohan, Timothy	12.72	
N. B. Street Transportation Co.,	2.98	
Neagus, William A.	26.26	
Niles, John	12.54	
Norton, Thomas	3.12	
Perkins & Chase,	1,291.68	
Perry, Joseph F.	3.01	
Peirce, J. Henry	38.18	
Quirk, Patrick	4.49	
Reed, Eli W.	20.91	
Russell, Jeremiah B.	20.28	
Shea, Michael	104.52	
Sheehan, Timothy	35.66	
Simmons, E. E.	18.25	
Spooner, Joseph W.	89.41	
Stowell, C. H.	13.59	
Sullivan, John B.	3.18	
Sylvia, M. L.	50.62	
Waters, Michael	4.57	$8,714.43
To transfer to highways and streets, concrete sidewalks and repairs,		70.16
To transfer to highways and streets, flagging and repairs,		52.56
To transfer to highways and streets, private work and trimming trees,		40.97
		$8,878.12

Cr.

By appropriation,	$6,600.00	
Special appropriation,	1,155.00	
Transfer from highways and streets, miscellaneous,	126.15	
Transfer from highways and streets, private work and trimming trees,	671.11	
Transfer to balance,	325.86	$8,878.12

HIGHWAYS AND STREETS — COLLECTING ASHES.

Dr.

Pay-rolls,	$5,985.46	
Supplies:		
Anthony & Sons, E., incorp.,	4.20	
Evening Journal Co.,	5.44	
Mercury Pub. Co.,	4.10	
Sowle & Co., F. L.	.75	$5,999.95

Cr.

By appropriation,	$4,950.00	
Special appropriation,	866.25	
Transfer to balance,	183.70	$5,999.95

HIGHWAYS AND STREETS—CONCRETE SIDEWALKS AND REPAIRS.

Dr.

Pay-rolls,	$1,893.25	
Supplies:		
Bertram, John	26.18	
Hart & Akin,	15.00	
Macomber & Colwell,	15.00	
N. B. Boiler & Machine Co.,	11.45	
N. B. Gas & Edison Light Co.,	1,012.50	
Peirce, J. Henry	14.13	
Perkins & Chase,	1,035.97	
Russell, John A.	83.03	
Spencer's Wood Yard,	7.50	
Wood, Brightman & Co.,	1.25	$4,115.26

Cr.

By appropriation,	$2,475.00	
Special appropriation,	932.08	
Transfer from highways and streets, cobble paving and repairs,	70.16	
Transfer from highways and streets, miscellaneous,	87.43	
Transfer from highways and streets, private work and trimming trees,	323.24	
Transfer to balance,	227.35	$4,115.26

HIGHWAYS AND STREETS—CROSSWALKS AND REPAIRS.

Dr.

Pay-rolls,	$764.10	
Supplies:		
McCabe, John	1.09	
Paisler, Charles S.	609.50	
Perkins & Chase,	8.00	
Waters, Michael	.56	$1,383.25
To transfer to balance,		679.25
		$2,062.50

Cr.

By appropriation,	$2,062.50

HIGHWAYS AND STREETS—CURBING AND REPAIRS.

Dr.

Pay-rolls,	$2,777.46	
Supplies:		
Engineering Department,	4.85	
Hicks, William H.	2.62	
McCabe, John	2.49	
N. B. Water Works,	7.68	
Norton, Thomas	1.98	
Paisler, Charles S.	4,176.46	
Waters, Michael	4.50	$6,978.04
To transfer to highways and streets, city stables,		338.70
		$7,316.74

Cr.

By appropriation,	$6,187.50	
Special appropriation,	866.25	
Transfer from highways and streets, miscellaneous,	149.08	
Transfer from highways and streets, private work and trimming trees,	50.55	
Transfer to balance,	63.36	$7,316.74

HIGHWAYS AND STREETS—FILLING AND GRADING.

Dr.

Pay-rolls,	$14,128.87	
Supplies:		
Acushnet Mills Corporation,	898.50	
Cornell, Pardon	3.40	
Crapo, Peter	10.72	
Duff & Son, David	5.60	
Engineering Department,	9.55	
N. B. Boiler & Machine Co.,	1.13	
O'Leary, Patrick	10.00	
Poole, Philip S.	5.46	
Rotch Spinning Corporation,	3,740.25	
Sowle & Co., F. L.	.45	
Spooner, Charles F.	15.00	
Sullivan, John B.	66.00	
Sylvia, Joseph	13.00	$18,907.93

Cr.

By appropriation,	$13,200.00	
Special appropriation,	2,516.25	
Transfer from highways and streets, cinder sidewalks and repairs,	261.71	
Transfer from highways and streets, miscellaneous,	735.43	
Transfer from highways and streets, private work and trimming trees,	857.42	
Transfer to balance,	1,337.12	$18,907.93

HIGHWAYS AND STREETS—FLAGGING AND REPAIRS.

Dr.

Pay-rolls,	$1,432.30	
Supplies:		
Brown, William S.	5.00	
Cook, D. H.	43.00	
Engineering Department,	.17	
Norton, Thomas	.96	
Paine & Bro., S. S.	1,607.10	
Paisler, Charles S.	1.82	
Waters, Michael	1.71	$3,092.06
To transfer to balance,		91.14
		$3,183.20

Cr.

By appropriation,	$2,475.00	
Special appropriation,	247.50	
Transfer from highways and streets, cobble paving and repairs,	52.56	
Transfer from highways and streets, miscellaneous,	376.86	
Transfer from highways and streets, private work and trimming trees,	31.28	$3,183.20

HIGHWAYS AND STREETS — GUTTERS AND REPAIRS.

Dr.

Pay-rolls,	$2,867.22
Supplies:	
Allen, Clark	3.81
Ashley, Mary P.	68.46
Blecha, Thomas	16.50
Bono, Joseph	3.52
Chaffee, Zach.	34.02
Dufresne, Adolph	12.76
Dunn, John,	2.64
Engineering department,	.56
Enos, Manuel	1.72
Gibbs, William J.	25.26
Grew, David, Jr.,	1.68
Hammond, John	23.41
Hammond, William H.	38.18
Harrington, M. F.	1.16
Haskell, Isaac F.	4.52
Hathaway, Paul S.	10.55
Holland, John	2.45
Howland, Charles E., Jr.,	6.16
Lawrence, Herbert W.	5.51
Lawton, Russell S.	1.07
McCabe. John	2.48
McCrohan, Timothy	24.40
Mendall, N. S.	4.05
N. B. Street Transportation Co.,	57.52
Norton, Thomas	3.18
Nunes, Antone	21.71
Pauchly, Joseph	43.88
Peckham, Benjamin	58.78
Peirce, J. Henry	39.00
Perkins & Chase,	275.18
Poole, Alice	30.60
Poole, Richard	9.03
Reed, Eli W.	15.31
Reynolds, Edward	68.23
Russell, Pardon	2.50
Sewers, general,	2.35
Shea, Michael	6.32
Skiff, Albert C.	4.14

Spooner Bros.,	$10.30	
Spooner & Bro., George H.	2.88	
Spooner, John A., 2d,	44.68	
Spooner, Joseph W.	215.91	
Sullivan, John B.	1.80	
Union Street Railway Co.,	7.01	
Waters, Michael	5.34	
Westgate, Herbert N.	44.62	
White, Rufus W.	14.80	
Williams, William	1.91	$4,149.07

Cr.

By appropriation,	$4,125.00	
Transfer to balance,	24.07	$4,149.07

HIGHWAYS AND STREETS—LABOR, STABLE YARD.

Dr.

Pay-rolls,	$514.43	
To transfer to balance,	63.07	$577.50

Cr.

By appropriation,	$577.50

HIGHWAYS AND STREETS—MACADAM.

DR.

Pay-rolls,	$11,172.37
SUPPLIES:	
Acushnet Iron Co.,	.24
Allen, Clark	6.69
Ames Plow Co.,	49.00
Andrews, Charles M.	45.98
Ashley, Henry T.	11.64
Ashley, Mary P.	50.10
Austin, Michael	.61
Bachen, Paul	27.20
Bancroft, J. V.	.93
Belisle, Napoleon	5.97
Blecha, Thomas	51.30
Bonneau, Treffle	7.37
Bono, Jeremiah	22.71
Bono, Joseph	128.45
Booth, George P.	18.59
Borden, George B.	5.35
Bosworth, Sarah M.	7.25
Bouchard, L. F.	140.49
Bowker & Tripp,	16.81
Brightman Bros.,	.40
Brightman, William H.	34.89
Bronson, L. B.	32.50
Brownell, Charles T.	8.43
Burke, James	14.10
Burns, James	122.60
Butts, C. H. W.	4.73
Beetle & Jenney,	6.15
Cobb, George A.	30.67
Chaffee, Zach.	44.43
Connell, John	2.06
Connors, John	1.56
Cook, D. H.	11.35
Corson, T. S.	268.88
Cory, George G.	54.24
Cory, I. C.	9.93
Coughlin, Michael	6.00
Crapo, Eugene	50.75
Crapo, Peter	686.59
Curtis, Manuel E.	23.51

Damzell, Emery	$38.18
Demoranville, Walter F.	12.43
Denault, Alfred	59.79
Denault, Fred.	27.44
Denault, Moses	52.95
Dollard, E. K.	6.86
Douglass, J. O.	14.26
Drake, A. B.	13.12
Duddy, James	36.72
Duff, David	149.14
Duff, John	2.36
Duff & Son, David	601.75
Dunn, John	76.03
Dwelley, Andrew	34.43
Enos, Joseph	27.55
Enos, Manuel	26.54
Farrell Foundry & Machine Co.,	544.04
Ferguson, David	21.38
Frazier, Victor	3.24
Gibbs, William J.	54.61
Gifford, Charles T. W.	49.68
Gill, Sevrin	46.99
Gilman, Charles A.	26.37
Goodran, Dollie	8.09
Gregoire, Peter	149.89
Grenier, Mary	39.98
Grew, David, Jr.,	112.87
Hammond, John N.	22.01
Harrington, Michael F.	33.86
Haskell, Isaac F.	32.95
Hatch & Co.,	4.50
Hathaway, Andrew E.	128.47
Hathaway, Henry W.	119.60
Hathaway, Paul E.	139.84
Hathaway, Paul S.	193.36
Hawes, S. T.	35.44
Hayes, N. P.	9.35
Holland, John	517.65
Homer, George S.	388.50
Howland Mills Corporation,	22.85
Jacintho, John	44.08
Jenks, Andrew F.	10.43
Jenney & Buffington,	4.28
Kennedy, Joseph P.	20.85
Kenney, William	22.39
Kent, Chancellor	20.35

King, Robert B.	$56.28
Lawrence, H. W.	1.31
Lawrence, James A.	3.45
Lawton, Russell S.	15.60
Lazy, Antone	31.31
Luscomb Machine Co.,	10.40
Macomber, William P.	25.05
Mahoney, T. E.	4.45
Manchester, John W.	237.01
McCarty, M.	66.27
McCrohan, Timothy	46.57
Mitchell, James	45.19
Murkland, James	13.07
N. B. Boiler & Machine Co.,	16.20
N. B. Manufacturing Co.,	1.96
N. B. Street Transportation Co.,	276.06
N. B. Water Work,	12.30
New York, New Haven & Hartford R. R. Co.,	10.77
Norcross Brothers,	11.29
Notter, John	2.00
Nunes, Antone	25.87
Nunes, Maria	1.63
Offley, G. W.	20.85
Old Colony Railroad Co.,	9.84
O'Keefe, Edmund	.96
O'Leary, Patrick	38.55
Oree, Louis	6.08
Pauchly, Joseph	53.89
Pease, James H.	1.24
Peckham, Benjamin	49.56
Perkins, A. W.	29.46
Perkins & Chase,	24.36
Pierce, E. H.	13.23
Peirce, J. Henry	9.77
Poole, Alice	2.04
Poole, Richard D.	.71
Pope's Island Manufacturing Co.,	6.25
Potter, George A.	44.24
Potter, B. J.	15.51
Quirk, Patrick	28.80
Reed, Eli	30.23
Reynolds, Edward	25.09
Rogers, Abiathar	139.24
Rogers, E. D.	7.23
Rogers, Joseph H.	30.80
Roy, Arthur	15.11

Roy, Louis	$56.50
Russell, John A.	19.50
Russell, Pardon	10.50
Ryan, Thomas	.66
Sewers, general,	123.61
Shea, Michael	372.28
Sheehan, Timothy	17.89
Sherman, David W.	10.53
Simmons, E. E.	167.92
Skiff, Albert C.	9.57
Smith-Carleton Iron Co.,	2.04
Sowle & Co., F. L.	9.02
Spencer, Fred. J.	69.63
Spooner, Charles T.	1.22
Spooner, Edward F.	27.33
Spooner & Bro., George H.	26.12
Spooner, James L.	15.59
Spooner, John A.	63.05
Spooner, John A., 2d,	36.98
Spooner, Joseph W.	202.45
St. Claire, Bruno	31.04
Stowell, F. A.	10.93
Stowell, C. H.	137.58
Strong, Albert	118.81
Sullivan, John B.	209.38
Sutton, Benjamin	10.57
Swain, Esaias R.	39.14
Sylvia, Joseph	1.34
Sylvia, Manuel L.	27.58
Sylvia, Manuel S.	111.86
Sylvia & Alexander,	2.90
Terry, E. & K. C.	10.62
Thorpe, Joseph	26.18
Tinkham, J. M.	6.48
Tripp, James H.	21.09
Tripp, John H.	50.24
Tripp, Peleg	15.51
Union Street Railway Co.,	91.64
Upham, W. O. T.	32.79
Waite, Williams & Co.,	15.93
Wallace, Alanson	3.88
Walworth Manufacturing Co.,	2.36
Warren, David	85.76
Wellington, A. J.	150.57
Westgate, Clarence E.	15.33
Westgate, Herbert N.	13.71

White, Clifford	$53.56	
White, Rufus W.	16.14	
Whiteside, John	31.27	
Wilbur, James T.	211.55	
Wilbur, S. S.	392.92	
Williams, William	13.42	
Winslow, Charles H.	17.22	
Wood, Brightman & Co.,	.58	$21,929.62
To transfer to highways and streets, city tool house and workshop,		172.08
		$22,101.70

Cr.

By appropriation,	$14,850.00	
Special appropriation,	3,223.85	
Transfer from highways and streets, miscellaneous,	708.14	
Transfer from highways and streets, private work and trimming trees,	935.22	
Transfer to balance,	2,384.49	$22,101.70

HIGHWAYS AND STREETS — MAIN OFFICE EXPENSES AND SALARIES.

Dr.

Pay-rolls,	$5,110.14	
Supplies, etc:		
Allen, Edwin	1.25	
Anthony & Sons, E., incorp.,	15.40	
Ballard and Kirschbaum,	1.00	
Cummings, C. S. & B.	.80	
Dews, Edwin	116.31	
Douglass, F. M.	1.25	
Drake, A. B.	3.80	
Evening Journal Co.,	2.50	
Engineering department,	86.49	
Fox, George S., agent,	20.68	
Greenough & Co., W. A.	2.00	
Hart & Akin,	.35	
Hutchinson & Co., H. S.	1.08	
Mercury Publishing Co.,	117.83	
N. B. Gas & Edison Light Co.,	103.02	
N. B. Ice Co.,	25.98	
Odd Fellows' Building Association,	858.36	
Purrington, Brown & Richards,	9.33	
Richards, George D.	.40	
So. Mass. Telephone Co.,	63.00	
Sowle & Co., F. L.	2.00	
Taber, Robert W.	.25	
Whiting & Co., E. B.	3.00	$6,546.22

Cr.

By appropriation,	$5,280.00	
Special appropriation,	1,214.65	
Transfer to balance,	51.57	$6,546.22

HIGHWAYS AND STREETS — MISCELLANEOUS.

DR.

Pay-rolls,	$4,529.22
SUPPLIES:	
Adams & Smith,	40.50
Allen & Son, A. W.	34.25
Allen & Son, R. N.	3.00
Anthony & Sons, E., incorp.,	69.40
Ashley, Isaac L.	8.50
Bates & Kirby,	93.22
Bowker & Tripp,	.58
Brownell, Dr. William E.	25.00
Butler, W. P.	4.02
Coggeshall, C. W.	12.21
Corson, T. S.	44.36
Crapo, Peter	1.00
Cummings, C. S. & B.	67.19
Delano's Sons, George	132.70
Denham, 2d, & Co., James R.	3.64
DeWolf & Vincent,	17.75
Dews, Edwin	330.21
Drake, A. B.	89.26
Driscol, Church & Hall,	70.06
Duddy, James	25.67
Duff, David	224.71
Duff & Son, D.	474.42
Engineering department,	2.60
Evening Journal Co.,	57.65
Equi, Louis	.23
Frost & Adams,	34.08
Greene & Wood,	17.75
Garcia, John	50.00
Greenough & Co., W. A.	2.00
Hart & Co., T. M.	20.05
Hatch & Co.,	5.95
Hathaway, L. J.	33.99
Hayes, N. P.	54.15
Jenkins, B. S.	.36
Jenney & Buffington,	75.20
Kennedy, Joseph P.	15.50
Kirby & Hicks,	38.50
Luce, Thomas	41.67
Luscomb Machine Co.,	7.82

Lowe, S. C.	$.14	
Mahoney, T. E.	2.10	
Mercury Publishing Co.,	272.44	
N. B. Boiler & Machine Co.,	74.08	
N. B. Cordage Co.,	125.66	
N. B. Gas & Edison Light Co.,	23.61	
N. B. Street Transportation Co.,	2.25	
N. B. Water Works,	6.78	
N. Y., N. H. & H. Railroad Co.,	3.92	
Old Colony Railroad Co.,	2.28	
Old Colony Steamboat Co.,	.90	
Odd Fellows' Building Association,	350.02	
Paisler, Charles S.	7.56	
Parks and squares,	9.12	
Pasell, F. H.	7.50	
Pease, James H.	1.58	
Perkins & Chase,	810.04	
Perry & Son, S. F.	46.25	
Pierce, E. H.	5.03	
Peirce, J. Henry	6.00	
Purrington, Brown & Richards,	63.20	
Richards, George D.	1.30	
Sawin, A. K. P.	.60	
Sewers, Union street,	2.10	
Sherman, George C.	3.68	
Sherman, James L.	74.72	
So. Mass. Telephone Co.,	45.30	
Sowle & Co., F. L.	86.78	
Standard Oil Co.,	5.13	
Swan, Edward	1.75	
Terry, E. & K. C.	86.20	
Vacuum Oil Co.,	32.50	
Waite, Williams & Co.,	251.26	
Wood, Brightman & Co.,	56.00	$9,226.15
To transfer to highways and streets, city stables,		1,713.77
To transfer to highways and streets, city tool house and workshop,		438.45
To transfer to highways and streets, cobble paving and repairs,		126.15
To transfer to highways and streets, concrete sidewalks and repairs,		87.43
To transfer to highways and streets, curbing and repairs,		149.08
To transfer to highways and streets, filling and grading,		735.43
To transfer to highways and streets, flagging and repairs,		376.86
To transfer to highways and streets, macadam,		708.14

To transfer to highways and streets, sweeping and cleaning streets,	$203.47
To transfer to balance,	7,934.57
	$21,699.50

Cr.

By appropriation,	$6,435.00	
Special appropriation,	82.50	
Cash receipts, as per Treasurer's report,	15,182.00	$21,699.50

HIGHWAYS AND STREETS—MOVING SNOW AND ICE.

Dr.

Pay-rolls,	$1,773.91	
Supplies:		
Richards, George D.	2.60	
Sowle & Co., F. L.	3.15	$1,779.66

Cr.

By appropriation,	$330.00	
Special appropriation,	57.75	
Transfers from highways and streets, private work and trimming trees,	1,188.48	
Transfer to balance,	203.43	$1,779.66

HIGHWAYS AND STREETS — PRIVATE WORK AND TRIMMING TREES.

Dr.

Pay-rolls,	$13,805.77
Supplies:	
Ashley & Peirce,	6.50
Block paving Acushnet avenue,	4.80
Bliss, Thomas	2.72
Bristol Manufacturing Co.,	35.93
Brownell, George A.	25.00
Brownell, George L.	7.25
Bullard, Dr. John T.	20.00
Butler, William P.	1.45
Correa & Francis,	.80
Duff, David	44.52
Duff & Son, David	60.52
Eggars, George	216.29
Engineering department,	52.11
Greene & Wood,	196.24
Gurney, W. A.	1.20
Hatch, George E.	1.00
Hayes, N. P.	8.75
Higgins, E. O.	1.30
Lowe, S. C.	2.52
Lussier, Dr. C. F.	5.00
Mahoney, T. E.	3.00
Maxfield & Son, William	1.99
Mercury Publishing Co.,	7.00
N. B. Boiler & Machine Co.,	9.87
N. B. Cordage Co.,	12.00
N. B. Street Transportation Co.,	1.25
N. B. Water Works,	2.27
Otheman & Dunham,	7.07
Penney, E. F.	1.20
Perkins & Chase,	47.96
Pierce, E. H.	3.00
Pierce Manufacturing Co.,	3.95
Purrington, Brown & Richards,	12.50
Sewers, general,	2,216.17
Sewers, Nye street,	1.28
Sowle & Co., F. L.	12.54
St. Germain, Dr. J. P.	3.00
Sylvia, Dr. M. V.	84.00

Terry, E. & K. E.	$26.04	
West, William R.	1.70	
Wrightington, William H.	25.12	$16,982.58
To transfers to highways and streets, block paving,		2,700.00
" " city stables,		421.92
" " city tool house and workshop,		4,091.15
To transfers to highways and streets, cobble paving and repairs,		671.11
To transfers to highways and streets, concrete sidewalks and repairs,		323.24
To transfers to highways and streets, curbing and repairs,		50.55
" " filling and grading,		857.42
" " flagging and repairs,		31.28
" " macadam,		935.22
" " moving snow and ice,		1,188.48
" " sweeping and cleaning streets,		189.85
Transfer to balance,		627.21
		$29,070.01

Cr.

By appropriation,	$1,650.00	
Transfer from highways and streets, cobble paving and repairs,	40.97	
Cash receipts, as per Treasurer's report,	27,379.04	$29,070.01

HIGHWAYS AND STREETS—SWEEPING AND CLEANING STREETS.

Dr.

Pay-rolls,	$7,620.78	
Supplies:		
Abbott, Downing Co.,	29.00	
Acushnet Iron Co.,	.66	
Ames Plow Co.,	192.00	
DeWolf & Vincent,	14.75	
Goodman Manufacturing Co.,	56.73	
Hatch & Co.,	.75	
Jenkins, B. S.	.40	
Kirby & Co., George, Jr.,	2.40	
Luscomb Machine Co.,	2.05	
N. Y., N. H. & H. Railroad Co.,	.50	
Old Colony Railroad Co.,	10.27	
Potter, Dr. William G.	11.00	
Purrington, Brown & Richards,	6.45	
Sawin, A. K. P.	.50	
Sewers, general,	.25	
Sowle & Co., F. L.	17.50	
Wakefield Rattan Co.,	44.00	$8,009.99

Cr.

By appropriation,	$6,435.00	
Special appropriation,	1,126.12	
Transfers from highways and streets, miscellaneous,	203.47	
Transfers from highways and streets, private work and trimming trees,	189.85	
Transfer to balance,	55.55	$8,009.99

INCIDENTALS.

Dr.

Advertising:		
Anthony & Sons, E., incorp.,	$26.21	
Boston Daily Advertiser,	61.88	
Mercury Publishing Co.,	1.66	$89.75
Assessors:		
Baylies, Clifford	$10.00	
Board of Assessors,	75.00	
Chappell, A. B.	234.50	
Davis, C. F.	133.75	
Fregeau, Frank	8.75	
Gardner, H. B.	7.50	
Hathaway, W. W.	3.50	
Mills, M. T.	350.50	
Parker, George W.	10.00	
Paul, Frank	282.50	
Rogers, John D.	151.50	
Ruggles, Jonn A.	1.00	
Russell, A. B.	30.00	
Russell, H. C.	331.00	
Russell, W. H.	48.75	
Sullivan, Joseph H.	149.00	
Topham, R. R.	936.00	
Tuell, C. A.	540.00	
Tuell, F. P. P.	45.00	
Willis, W. H.	52.50	3,400.75
Damages, Legal Expenses, Etc.:		
Allen, Timothy C.	$2.80	
Clifford, Walter	136.80	
Crapo, Clifford & Clifford,	6.75	
Holmes, L. LeB.	30.00	
Howland Mills Corporation,	1,500.00	
Knowlton, H. M.	375.00	
Lunn, Sophia	61.00	
Talbot, William	1,300.00	
Teachman, Frank B.	132.00	
White, Annie M.	11.10	3,555.45
Elections:		
Bradley, William E.	$6.00	
Faunce, Loum H.	40.00	
Jason, A. V.	10.00	

Jones, Isaac M.	$6.00	
King, P. H.	6.00	
Kirby & Hicks,	6.00	
Macomber, William E.	3.00	
Perry & Son, S. F.	3.00	
Piper, J. Arthur	18.00	
Precinct officers,	1,132.00	
Reynolds, E. G.	6.00	
Richards, William D.	6.00	
Saxon, George E.	50.00	
Smith, Allen, Jr.,	3.00	
Swift, T. S.	6.00	
Sherman, William H.	6.00	$1,307.00
LABOR AND CLEANING:		
Backus, George F.	$.25	
McAuliffe, D. J.	698.00	
Pell, Walter D.	16.00	
Piper, A. D.	75.98	
Piper, C. B.	52.50	
Piper, D. M.	650.00	
Rickerby, Thomas	13.75	1,506.48
LIGHT AND FUEL:		
Corson, T. S.	$529.79	
Hart & Akin,	171.03	
N. B. Gas & Edison Light Co.,	2,401.91	
Notter, John	2.10	
Phillips, Lawson	77.04	3,181.87
BIRTH, MARRIAGE, AND DEATH RETURNS:		
Auclaire, L. Z.	$4.50	
Brownell, Dr. William E.	6.75	
Ellis, Louisa A.	1.50	
Flitcroft, Mary	7.75	
Fortin, Dr. J. E.	34.50	
Grieves, Sarah	2.00	
Guba, Emile	5.00	
Hough, Drs. G. T. & G. de N.	7.50	
Howland, Dr. B. C.	1.25	
Hunt, Dr. C. R.	5.25	
Jean, J. B.	35.00	
Lagasse, A. P.	17.75	
Leonard, Daniel B.	1,023.60	
Leonard, Dr. M. H.	24.25	
Lussier, Dr. C. F.	20.25	

Murphy, T. J.	$13.75	
Nickerson, Dr. W. J.	3.25	
Normandin, Dr. L. Z.	111.75	
Pierce, Dr. A. M.	48.25	
Peterson, Dr. C. A. B.	3.00	
Shaw, Dr. J. C.	12.50	
St. Germain, Dr. J. P.	8.50	
Stevens, Dr. H. L.	2.75	
Sullivan, J. D.	39.50	
Sullivan, Dr. J. F.	7.75	
Swift, Dr. W. N.	4.75	
Thompson, Elizabeth	2.50	
Vaughan, W. C., Jr.,	60.50	
Webber, Dr. Amos P.	9.50	
Webster, Dr. Helen W.	15.25	
Williams, Joseph S.	40.50	
Wilson, E. T.	83.25	$1,664.10

Inspector Milk and Provisions:

Ashley, Dr. D. C.	$60.00	
Evening Journal Co.,	2.35	
Mercury Pub. Co.,	2.50	64.85

Naval Reserves, Co. G:

Blossom Bros.,	$2.01	
Cornell, George T.	21.00	
Hart & Co., T. M.	10.75	
Kern & Wright,	45.82	
Lincoln Guards,	508.00	
Odd Fellows' Building Association,	15.00	
Pope, A. P.	5.80	
Slocum, F. R.	31.50	639.88

Miscellaneous:

Acushnet, town of, re-lettering boundary stones,	$3.00	
Alger, A. M., certifying to wills,	7.90	
Alley, A. G., Jr., matches,	2.25	
Anthony & Sons, E., incorp., subscriptions,	30.00	
Ashley, Dr. D. C., inspecting cattle,	125.00	
Ashley, Isaac L., carriage and hack hire,	4.70	
Allen estate, Gideon, cemetery care,	3.88	
Ballard & Kirschbaum,	4.00	
Bancroft, J. V., sprinkling,	60.00	
Barrows, F. C., expenses of committee,	8.00	
Bartlett, George F., land rent rifle range,	120.00	
Bates Manufacturing Co., numbering machines,	48.00	

Baylies, Clifford, repairing clocks,	$1.25
Bliss & Nye, soap dishes, mops, and sweepers,	13.90
Boston Daily Advertiser, subscription,	6.00
Briggs, Z. M., postal guide, typewriting,	4.50
Briggs & Lawrence, use of furniture, boxing plans,	41.00
Brightman, Charles O., labor on review stand,	3.50
Brightman, F. S., expense to Boston,	4.00
Bristol county, board of truants,	1,108.23
Brock, J. C., committee expenses,	43.36
Brownell, heirs of H. M., expenses of harbor commission,	98.50
Bryant & Brett, soap,	16.45
Bliss, George C., cemetery care,	6.01
Caswell, A. R., use of barge,	11.00
Cemeteries, care of lots,	869.56
Chamberlain, C. C., voucher cases,	49.20
Chappell, A. B., delivering tax bills,	18.75
City Auditor, office expenses,	25.87
City Clerk, office expenses,	119.02
City Solicitor, office expenses,	30.75
City Treasurer, office expenses,	398.00
Cornell, C. R., carriage and hack hire,	57.50
Covil, A. E., carriages,	8.50
Covil, O. E., carriages,	1.50
Cranston, O. W., hanging awnings,	1.00
Crapo, H. H., expenses of committee,	19.74
Cummings, C. S. & B., lunch,	6.50
Davis, C. S., services in Treasurer's office,	120.25
Davis & Co., J., brush and blacking,	1.20
Dews, Edwin, subscriptions,	18.00
Dews, Edwin, office sundries,	18.10
DeWolf & Vincent, padlocks and keys,	6.75
Douglass, F. M., brush,	1.25
Drake, A. B., City Forester,	100.00
Drake, A. B., services,	33.33
Durfee, E. M., repairing seal,	2.63
Felt & Tarrant Manufacturing Co., comptometer,	125.00
Footman, John W., repairs on ordnance,	16.00
Fouquet, John D., engineering services,	500.00
Fox, George S., agent, typewriter and supplies,	87.50
Gardner, H. B., delivering tax bills,	15.00
Gifford & Co., T. J., labor, Guards' armory,	6.10
Greene, F. B., agent, rent Guards' armory,	875.00
Greenough & Co., W. A., directories,	18.00
Hammond, E. B., architect's fees,	909.15
Hart & Co., T. M., one canvas cover,	2.75

Hart & Akin, lettering signs and trunks,	$4.05
Haskell, Edward S., expenses to Boston,	4.05
Hathaway, George B., engrossing letters,	6.00
Hathaway, Nathaniel, analysis of milk,	25.00
Hathaway, W. W., use of horse,	58.00
Hatch & Co., express,	2.30
Hayden, Eugene, carriages,	2.50
Hayden & Smith, carriages,	7.00
Howland, Gertrude S., typewriting,	2.00
Howland, Thomas D., services as Deputy Constable,	780.00
Hutchinson & Co., H. S., acts and resolves,	6.50
India Alkali Works, 1 keg savogran,	8.32
Kelley & Son, J. S., repairing clock,	1.50
Kempton, estate David, 2d, rent of land,	93.75
Kingman, G. D., services,	60.00
Kirby & Hicks, carriages,	58.00
Lawton, C. H. & H. A., comb and brush,	1.35
Library Bureau, card indexes,	17.25
Louis, T. W., delivering tax bills,	10.00
Lowe, William, cemetery care,	20.55
Luther, H. R., delivering tax bills,	10.00
Mackie, William A., printing orders and postage,	61.36
Macomber, P. A., examining cemetery books,	107.60
Mandell, S. G., batteries, labor and keys,	8.50
Maxfield, George F., tin box,	4.00
Mercury Publishing Co., subscriptions,	36.00
" " " papers, and printing postals,	8.76
Morgan, Crossman & Co., stamp rack,	2.00
N. B. Ice Co., ice,	64.69
N. B. Tow Boat Co., services, harbor master,	15.00
N. Y., N. H. & H. Railroad, gate tender, Sawyer st.,	214.00
" " sewer, Hazard's wharf,	100.00
" " mileage tickets,	20.00
North Congregational Church, use of bell,	60.00
Norton, H. F., decorating,	5.00
O'Keefe, Edmund, expenses,	13.15
Old Colony Railroad Co., gate tender, Sawyer st.,	151.00
" " sewer, Hazard's wharf,	300.00
" " tickets,	40.00
Parker, George W., services, Treasurer's office,	23.50
Parker, W. W., iron trunks, '91 and '92,	45.00
Paul, Frank, delivering summons and tax bills,	60.00
Pierce, E. M., carriages,	25.50
Pierce, A. C., services,	103.50

Perry & Son, S. F., carriages,	$10.00	
Phillips, H. T., superintendence delivery of coal,	10.00	
Priest, Page & Co., weights for city sealer,	1.89	
Purrington, Brown & Richards, baskets, brushes, coal hods, tacks, and soap,	7.75	
Reynolds, E. G., carriages,	126.50	
Richards, George D., basket and dusters,	2.95	
Richmond, George B., recording deeds,	1.50	
Ricketson's Block, proprietors of, heating,	56.00	
Russell, H. C., delivering summons and tax bills,	70.00	
Ruggles, John A., use of horse,	1.50	
Sampson, Murdock & Co., directories,	8.00	
Sanders & Barrows, hat and gloves,	5.00	
Sanford & Kelley, binding books,	13.00	
Searles, Mortimer, rubber stamps,	32.05	
Shannon, James J., typewriter supplies,	1.25	
Shannon & Co., J. J., typewriter supplies,	1.00	
Sherman & Son, C. R., batteries and labor,	5.75	
Sherman, Ruth S., services City Clerk's office,	700.00	
Sherman, William H., carriages,	9.50	
Skiff, A. J., cemetery care,	1.50	
Smith, Allen, Jr., carriages,	3.00	
Smith, Henry, expenses truants,	7.40	
So. Mass. Telephone Co., telephones,	517.62	
So. Mass. Telephone Co., messages,	30.28	
Taber, Robert W., envelopes and scrapbook,	9.00	
Taylor, William T., expenses of committee,	11.00	
Temporary loan, interest,	135.55	
Thorup, William M., delivering tax bills,	17.50	
Watson, Samuel, 2d, delivering tax bills,	8.75	
Weeden, Florence T., services City Clerk's office,	224.00	
Weeden, George F., delivering tax bills,	5.00	
West, Henry S., rent of boat,	55.00	
Western Union Telegraph Co., sounder service,	35.00	
Western Union Telegraph Co., rent of clock,	14.00	
Whiting & Co., E. B., toweling,	20.64	
Wilcox & Richmond Wharf Co., rent,	100.00	
Wilson, George, cemetery care,	16.00	
Woodworth, Charles E., cleaning and repairing clock,	10.00	
Woodworth, Charles E., new box for weights,	8.88	
Williams, W. F., expenses,	17.90	
Yale Time Lock Co., cleaning clock,	15.00	$11,209.67
		$26,619.80

To transfer to	special appropriations, 1893,	$10,000.00	
"	Board of Health, incidentals,	110.72	
"	Cedar Grove street school house,	196.63	
"	fire department, purchase of horses,	250.00	
"	incidentals, armories and military property,	500.00	
To transfer to	Pleasant street land damages,	4,260.00	
"	police station and ward room, South Water street,	486.53	
To transfer to	public schools, Cooking school,	600.00	
"	" Benjamin school,	350.00	
"	" Dartmouth street school,	1,375.00	
To transfer to	public schools, Manual training school,	1,000.00	
"	repairs of city property,	2,664.73	$21,793.61
			$48,413.41
Jan. 1, 1894.	To balance,		1,678.00
			$50,091.41

Cr.

By appropriation,		$40,341.75	
Special appropriations,		2,178.00	
Cash receipts, as per Treasurer's report,		30.40	
Transfer from unappropriated funds,		7,432.10	
"	sundry accounts,	109.16	$50,091.41

Cr.

Jan. 1, 1894.	By balance,	$1,678.00

INCIDENTALS — ARMORIES AND MILITARY PROPERTY.

Dr.

Allen, A. W.	$431.93	
Pope, A. P.	38.94	$470.87
To transfer to balance,		29.13
		$500.00

Cr.

By transfer from incidentals,	$500.00

INCIDENTALS—FOURTH OF JULY.

Dr.

Allen, James W.	$12.00	
Anthony & Sons, E., incorp.,	15.00	
Barnes, Isaac	3.00	
Evening Journal Co.,	12.50	
Guthrie, W. W.	3.00	
Kent, James D. T.	3.00	
Lincoln Guards Band,	90.00	
Maxfield, A. R.	3.00	
McFarlin, James	30.00	
Mercury Pub. Co.,	13.33	
Musical Exchange Band,	90.00	
Piper, D. M.	1.50	
Pollock, F. O.	3.00	
Rau, G. L.	6.00	
Robinson, William	3.00	
Robenolt, E. S.	3.00	
Simpson's Cadet Band,	80.00	
Union Veteran Legion,	110.00	
Warfield, James H.	3.00	$484.33
To transfer to balance,		65.67
		$550.00

Cr.

By transfer from unappropriated funds,	$550.00

INCIDENTALS—G. A. R. POSTS.

DR.

Soule, R. A., treasurer,	$600.00

CR.

By special appropriation,	$600.00

KEMPTON STREET SCHOOL HOUSE AND LOT.

DR.

Davis, Z. B.	$38,229.66	
Fuller & Warren Warming and Ventilating Co.,	1,381.32	
Hart & Akin,	63.72	
Hayes, N. P.	18.00	
Merrill & Cutler,	1,672.36	
N. B. Gas & Edison Light Co.,	119.92	
N. B. Water Works,	8.42	
O'Herne, William	25.00	$41,518.40
Jan. 1, 1894. To balance,		690.68
		$42,209.08

CR.

Jan. 2, 1893. By balance,	$38,575.00	
Special appropriation,	2,761.72	
Transfer from unappropriated funds,	872.36	$42,209.80

CR.

Jan. 1, 1894. By balance,	$690.68

LAYOUT AND ACCEPTANCE SEARS COURT.

Dr.

Bates & Kirby,	$8,228.00	
N. B. Five Cents Savings Bank,	5,000.00	$13,228.00
Jan. 1, 1894. To balance,		1,000.00
		$14,228.00

Cr.

By special appropriation,	$14,228.00

Cr.

Jan. 1, 1894. By balance,	$1,000.00

LIGHTING THE STREETS—ARC LIGHTS.

Dr.

N. B. Gas & Edison Light Co.,	$17,546.75

Cr.

By appropriation,	$13,167.00	
Special appropriation,	2,793.00	
Transfers to balance,	1,586.75	$17,546.75

LIGHTING THE STREETS—GAS LIGHTS.

Dr.

N. B. Gas & Edison Light Co.,	$9,724.17

Cr.

By appropriation,	$7,189.87	
Special appropration,	1,525.13	
Transfer to balance,	559.17	$9,274.17

LIGHTING THE STREETS—GLOBE LIGHTS.

DR.

Globe Gas Light Co.,	$11,121.60	
To transfer to balance,	794.40	$11,916.00

CR.

By appropriation,	$9,830.70	
Special appropriation,	2,085.30	$11,916.00

LIGHTING THE STREETS—INCANDESCENT LIGHTS.

DR.

N. B. Gas & Edison Light Co.,		$443.80

CR.

By appropriation,	$346.50	
Special appropriation,	73.50	
Transfer to balance,	23.80	$443.80

LIGHTING THE STREETS—SUNDRIES.

DR.

Globe Gas Light Co.,	$136.00	
Kempton estate, F. A.	31.25	
Mercury Pub. Co.,	3.25	
N. B. Gas & Edison Light Co.,	119.25	
Old Colony Railroad Co.,	.82	
Sherman & Son, C. R.	1.90	$292.47
To transfer to balance,		696.94
		$989.41

CR.

By appropriation,	$815.93	
Special appropriation,	173.07	
Cash receipts, as per Treasurer's report,	.41	$989.41

NEW BEDFORD AND FAIRHAVEN BRIDGE.

Dr.

Pay-rolls,	$1,333.59	
Repairs and Supplies:		
Bowen, George S.	7.50	
Bates, Lot B.	2.00	
Chace & Co., Abram	377.01	
Driggs, James D.	6.44	
Greene & Wood,	7.96	
Highways and streets, miscellaneous,	157.53	
Nye, William F.	1.80	
Paine & Bro., S. S.	37.98	
Parks and squares,	1.57	
Sturtevant, William E.	6.50	$1,939.88
To transfer to balance,		122.62
		$2,062.50

Cr.

By appropriation,	$2,062.50

NEW BEDFORD SCHOOL COMMITTEE — HOWLAND FUND.

Dr.

American Book Supply Co.,	$63.35
Anthony & Sons, E., incorp.,	2.50
Blake, James E.	1.96
Bliss & Nye,	.30
Blossom, A. C.	5.00
Boston School Supply Co.,	114.21
Caproni & Bros., P. P.	12.93
Century Co.,	7.50
DeWolf & Vincent,	2.80
Ditson & Co., Oliver	4.50
Educator,	13.00
Educational Pub. Co.,	32.54
Eimer & Amend,	3.22
Franklin Educational Co.,	7.50
Frazer, George B.	.50
Gammons, Charlotte M.	4.60
Gibbs, Elizabeth M.	1.15
Ginn & Co.,	565.00
Gray, Charles A.	10.69
Goldthwaite, William M.	8.65
Hall & Son, Thomas	7.00
Hammett, J. L.	147.32
Harper & Bros.,	3.68
Haskins, Charles N.	5.00
Haskins, H. K.	15.00
Hatch & Co.,	36.50
Hayes, N. P.	18.46
Heath & Co., D. C.	52.09
Hillman, Washburn & Co.,	7.95
Holden Pat. Book Cover Co.,	249.57
Houghton, Mifflin & Co.,	127.84
Hutchinson & Co., H. S.	156.56
Jennings, W. A.	28.50
Kane & Bro., D. J.	66.14
Knowlton, McLeary & Co.,	3.00
Leach, Shewell & Sanborn,	44.70
Lee & Shepard,	97.99
Lombard, A. M.	26.00
Lothrop & Co., D.	.80
Mass. Society Prevention of Cruelty to Animals,	1.00
McAlister, T. H.	94.95

Mercury Pub. Co.,	$2.40	
Merrick, Emma J.	4.60	
Miller, Samuel E.	4.00	
N. B. Gas & Edison Light Co.,	.72	
N. E. Publishing Co.,	17.50	
Peirce, George	329.00	
Perry & Co., George S.	187.53	
Potter, Francis	4.60	
Potter, Hattie	4.60	
Public schools, incidentals,	21.36	
Purrington, Brown & Richards,	1.60	
Putnam's Sons, George	32.00	
Richter & Co., George H.	.75	
Russell Pub. Co.,	2.00	
Schoenhof, Carl	8.60	
Sheldon & Co.,	12.50	
Silver, Burdett & Co.,	127.12	
Stanley, N. A., D. M. D.,	.50	
Strange, F. W.	4.50	
Taber, R. W.	126.56	
University Pub. Co.,	31.47	
Watrous, Joseph	32.88	
White, Smith Pub. Co.,	13.60	
Wing, Charles F.	1.00	
Youth's Companion,	81.39	$3,104.73
Jan. 1, 1894. To Balance,		1,707.25
		$4,811.98

CR.

Jan. 2, 1893. By balance,	$1,811.98	
Cash receipts, as per Treasurer's report,	3,000.00	$4,811.98

CR.

Jan. 1, 1894. By balance,	$1,707.25

NEW BEDFORD SCHOOL COMMITTEE — JONATHAN BOURNE PRIZE FUND.

DR.

Hatch, William E.	$60.00	
Jan. 1, 1894. To balance,	30.00	$90.00

CR.

Jan. 5, 1893. By balance,	$30.00	
Cash receipts, as per Treasurer's report,	60.00	$90.00

CR.

Jan. 1, 1894. By balance,		$30.00

NEW BEDFORD WATER WORKS.

DR.

To expenditures, as per drafts of the N. B. Water Board,	$102,640.96	
Jan. 1, 1894. To balance,	41,337.41	$143,978.37

CR.

Jan. 2, 1893. By balance,	$41,063.33	
Appropriation,	9,900.00	
Transfer from unappropriated funds,	2,100.00	
Cash receipts, as per Treasurer's report,	90,915.04	$143,978.37

CR.

Jan. 1, 1894. By balance,		$41,337.41

PARKS FUND.

Cr.

Jan. 2, 1893. By balance,	$27,135.55	
Cash receipts, as per Treasurer's report,	92.50	$27,228.05

PARKS AND SQUARES.

Dr.

Pay-rolls,	$3,758.28	
Supplies:		
Allen, A. W.	44.25	
Anthony & Sons, E., incorp.,	3.96	
Baylies, William	6.25	
Corson, T. S.	12.50	
Denison Bros. Co.,	.64	
Donaghy, Thomas	2.38	
Hart & Co., T. M.	37.94	
Hart & Akin,	.80	
Hathaway, A. E.	28.80	
Hickey, M. A.	185.45	
Highways and streets, miscellaneous,	832.99	
Jenney & Sons, P. P.	51.08	
Murkland, James H.	274.00	
N. B. Cordage Co.,	135.30	
Sewers, general,	46.60	
Sewers, Union street,	.30	
Sewer tax,	106.08	
Taber, Edward C.	5.06	
West, William R.	174.10	$5,706.76
Jan. 1, 1894. To balance,		1,879.81
		$7,586.57

Cr.

Jan. 2, 1893. By balance,	$7,318.68	
Cash receipts, as per Treasurer's report,	267.89	$7,586.57

Cr.

Jan. 1, 1894. By balance,	$1,879.81

PERMANENT DEBT.

Dr.

Jan. 2, 1893. To balance,	$1,810.97	
Principal (bonds) paid,	37,000.00	
Interest on bonds,	77,779.50	
Interest on trust funds,	6,786.00	
Interest on notes,	16,405.79	$139,782.26

Cr.

By appropriation,	$128,500.00	
Cash receipts, as per Treasurer's report,	10,745.77	
Transfer to balance,	536.49	$139,782.26

PLATTING SYSTEM.

Cr.

By appropriation,	$17,435.00

PLEASANT STREET LAND DAMAGES.

Dr.

Bates & Kirby,	$4,445.00	
Cummings, heirs of Benjamin and William	9,510.00	
Millard, Mary C. S.	1,850.00	
New Bedford Five Cents Savings Bank,	1,840.00	
Richmond, S. P.	3,165.00	
Taber estate, Stephen	1,925.00	
Wood estate, Elizabeth, et als.,	10,400.00	$33,135.00

Cr.

By appropriation,	$28,875.00	
Transfer from incidentals,	4,260.00	$33,135.00

POLICE DEPARTMENT.

DR.

SALARIES:		
George Douglass, chief,	$1,816.07	
E. C. Gardiner, chief,	37.08	
Timothy C. Allen, captain,	1,071.50	
Luther M. Dayton, captain,	93.67	
James L. Wilbur, captain,	1,175.85	
Lemuel D. Adams, lieutenant,	1,078.24	
Timothy C. Allen, lieutenant,	96.15	
Seth E. Bryant, lieutenant,	1,078.24	
Thomas W. Comstock, lieutenant,	1,078.24	
Thomas Fay, lieutenant,	916.17	
Frederick Hussey, lieutenant,	162.34	
Arthur H. Jones, lieutenant,	927.00	
Ellery Peirce, lieutenant,	1,078.24	
Thomas J. Taft, lieutenant,	1,078.24	
Franklin L. Hathaway, inspector,	1,078.24	
John C. Parker, inspector,	1,078.24	
Harry N. West, clerk,	780.00	$14,623.51
PAY-ROLLS:		
Pay of regular officers, housekeepers, etc.,	$57,013.32	
Pay of special police,	2,646.20	59,659.52
CARRIAGE AND HORSE HIRE:		
Ashley, Isaac L	$53.35	
Bradley, William E.	3.00	
Brownell, John F.	10.00	
Caswell, A. R.	6.00	
Cook, Robert	26.00	
Cornell, Charles R.	16.10	
Dwelley, Andrew	1.50	
Jay, James F.	54.60	
Kirby & Hicks,	2.50	
Moore, J. P.	3.50	
Peirce, E. M.	1.50	
Reynolds, E. G.	23.00	
Richards, William D.	15.05	
Sherman, William H.	4.00	
Warren, David	5.50	225.60
SUPPLIES:		
Corson, T. S.	$301.42	
Driscol, Church & Hall,	44.09	

Folger, D. B.	$13.14	
Hart & Akin,	260.51	$619.16
POLICE SIGNAL:		
Beattie Zinc Works Co.,	$80.00	
Bird & Co., J. A. & W.	71.16	
Brightman, Charles O.	4.75	
Brownell, Ashley & Co.,	12.50	
Cronin, William	28.61	
DeWolf & Vincent,	.36	
Electric and Gas Lighting Co.,	8.00	
Fichtenmeyer & Flynn,	33.13	
Fire department,	866.50	
Gray, Charles A.	17.52	
Grinnell, E. S.	21.52	
Hart & Co., T. M.	5.66	
Hart & Akin,	70.18	
Hathaway, Henry C.	125.00	
Hillman, Washburn & Co.,	12.29	
Kelley, William L.	1.25	
Kirk, John	40.79	
Kirk, J. Frank	81.47	
Lowell, Clarence	60.50	
Luce, J. S.	1.00	
Macy, E. B.	4.00	
Mandell, S. G.	48.60	
N. E. Gamewell Co.,	22.93	
Pope, A. P.	16.95	
Poor department,	105.85	
Sherman & Son, C. R.	7.48	
So. Mass. Telephone Co.,	37.86	
Washburn & Moen Manufacturing Co.,	283.91	
Wilson, William	4.25	
Wood, R. B.	8.45	2,082.47
MISCELLANEOUS:		
Allen, A. W., making signs,	$10.05	
Allen, Edgar W., committing prisoner,	6.60	
Allen, Timothy, expenses,	2.85	
Almond, Walter, committing prisoner,	5.58	
American Supply Co., hose,	3.00	
Anthony & Sons, E., incorp., printing and advertising,	20.20	
Arnett, James W., committing prisoners,	20.92	
Ashley, Dr. D. C., examining horse,	6.00	
Ballard & Kirschbaum, telephone index,	1.00	

Bliss & Nye, globes, dusters and brushes,	$32.07
Boston Regalia Co., shoulder straps,	4.25
Brady, John W., committing prisoner,	5.63
Briggs & Lawrence, mats and chairs,	16.12
Brightman, Charles O., labor and zinc,	1.83
Brownell, Olive A., services,	21.16
Brownell, Dr. Wm. E., medical attendance,	5.00
Brownell, Ashley & Co., repairing buggy,	3.90
Callanan, Thomas F., committing prisoner,	5.98
Cannavan, Patrick, committing prisoner,	8.45
Caswell, William H., glass, varnish and labor,	26.06
Coggeshall, Maxfield & Co., tinware,	2.60
Cornell, Charles R., repairing buggy,	48.50
Covell, A. H., bug poison,	.90
Dews, Edwin, papers and stationery,	93.10
DeWolf & Vincent, globes and locks,	6.38
Donaghy, A. H. & J. J., laundry work,	92.67
Douglass, George, keeper of lockup,	100.00
Duff and Son, D., carting,	.75
Evans & Co., D., buttons,	148.00
Evening Journal Co., advertising,	13.91
Footman, John W., making tools,	1.93
Gallagher, Neil, overcoat,	30.00
Gardner, Emma K., meals,	216.54
Gay, Samuel R., screens,	9.70
Gendron, George E., expenses,	9.15
Gifford & Co., T. J., labor and repairs,	24.10
Greenough & Co., W. A., directories,	10.00
Hart & Akin, glass,	4.83
Haskell & Tripp, blankets and spreads,	9.75
Hathaway, Franklin L., expenses,	32.09
Hathaway, Franklin L., committing prisoners,	4.38
Hersom & Co., Thomas, soap,	9.45
Hillman, Washburn & Co., brushes, globes and hose,	21.57
Howland, H. B., clock,	6.00
Kelley & Son, J. S., repairing clock,	1.50
Kelley, William L., repairing badges and clocks,	19.95
Kempton estate, F. A., land rent,	31.25
Kern & Wright, lettering and hanging signs,	38.80
Lawton, C. H. & H. A., medicines,	6.70
Lerned & Co., C. W.	75.00
Littlefield, L. A., plating badges,	7.80
Lovell Arms Co., J. P., chain twisters,	9.00
Maine, H. M., beating carpets,	3.11
Mandell, S. G., fitting locks and bells,	7.05

McBay, Charles L., committing prisoners,	$19.23	
McFarlin, James, carting,	4.50	
Mercury Pub. Co., advertising and printing,	140.65	
Mitchell Manufacturing Co., badge,	1.00	
Moynan, Robert, committing prisoner,	1.00	
N. B. Boiler & Machine Co., repairs,	36.18	
N. B. Ice Co., ice,	23.05	
N. B. Gas & Edison Light Co., lighting,	843.89	
N. E. Gamewell Co., signal box No. 222,	30 00	
Parker, John C., expenses,	20.25	
Pope, A. P., locks and labor,	2.00	
Postal Telegraph Co.,	.73	
Randall, C. G. & G. A., lumber,	3.31	
Richmond & Co., S. P., pilot bread,	22.17	
Robbins Manufacturing Co., J. C., badges,	57.00	
Roscoe, William E., committing prisoner,	2.90	
Russell, Charles H., stock and labor,	16.02	
Sanders & Barrows, gloves,	15.50	
Savage, John W., pipe and labor,	5.65	
Simmons & Son, George W., shoulder straps,	13.50	
Slocum, F. R., bed, pillows, and mattress,	32.00	
So. Mass. Telephone Co., rentals,	374.80	
" " tolls and telegrams,	62.50	
" " moving telephone,	19.15	
Sowle & Co., F. L., night latches,	3.00	
Sowle, Nat. P., stock and turning,	5.70	
Spare, J. V., sheeting, blankets, and quilt,	14.45	
Sullivan, Timothy, committing prisoners,	21.88	
Telford, John, committing prisoner,	9.08	
Tilson, H. H., express charges,	5.00	
Tripp, S. A., pipe and labor,	3.35	
Viall & Cook, rent,	183.37	
Watson & Fuller, repairing clubs,	18.80	
Wilbur, S. S., removing night soil,	2.00	
Wilson, Thomas H., committing prisoner,	6.99	
Wing, Charles F., making and laying carpet,	22.04	
Wing, Joseph B., committing prisoner,	2.90	
Winship, H. A., belts, cords, and clubs,	107.50	
Wixon, James A., committing prisoner,	6.18	
Wood, Anna G., rent,	30.00	
Young, Emma, meals,	47.60	$3,539.93
		$80,750.19

Cr.

By appropriation,	$56,430.00	
Cash receipts, as per Treasurer's report,	6,784.18	
Special appropriation,	11,970.00	
Transfer from unappropriated funds,	4,500.00	
Transfer to balance,	1,066.01	$80,750.19

POLICE STATION AND WARD ROOM, CORNER BLACKMER AND SOUTH WATER STREETS.

Dr.

Bryant & Slade,	$1,892.50	
Gifford & Co., T. J.	289.54	
Hickey, M. A.	214.35	
Hunt, S. C.	31.58	
N. B. Gas & Edison Light Co.,	51.58	
Sherman, James H.	125.00	
Tower, J. H.	675.00	
Wing, Charles F.	99.95	$3,379.50

Cr.

Jan. 2, 1893. By balance,	$2,892.97	
Transfers from incidentals,	486.53	$3,379.50

POOR DEPARTMENT—BURIALS.

DR.

Jean. J. B.	$258.00	
Lagasse, A. P.	41.50	
Moriarty Bros.,	16.00	
Murphy, T. J.	105.00	
Sullivan, J. D.	16.00	
Vaughan, W. C., Jr.,	54.00	
Williams, J. S.	188.00	
Wilson, E. T.	310.00	$988.50
To transfer to balance,		13.50
		$1,002.00

CR.

By appropriation,	$825.00	
Transfer from unappropriated funds,	177.00	$1,002.00

POOR DEPARTMENT—CITIES AND TOWNS.

DR.

Acushnet,	$258.30	
Boston,	231.43	
Cambridge,	1.83	
Chelsea,	14.00	
Cottage City,	34.65	
Dartmouth,	48.00	
Falmouth,	98.00	
Nantucket,	72.00	
Raynham,	15.50	
Springfield,	63.00	
Taunton,	.50	
West Bridgewater,	72.00	
Worcester,	13.29	$922.50
To transfer to balance,		77.50
		$1,000.00

CR.

By appropriation,	$825.00	
Transfer from unappropriated funds,	175.00	$1,000.00

POOR DEPARTMENT—CLOTHING AND SUPPLIES.

Dr.

Blake, James E.	$5.00	
Buchell Shoe House,	5.25	
Greenburg, S.	8.00	
Haskell & Tripp,	3.50	
Howard & Bro., J.	2.00	
Lucas, A. E.	2.00	
Nichols & Damon,	5.00	
Sanders & Barrows,	1.00	
So. Mass. Telephone Co.,	.70	
Taber, Read & Gardner,	6.50	
Union Boot & Shoe Co.,	13.50	
Union for Good Works,	1.00	$53.45
To transfer to balance,		346.55
		$400.00

Cr.

By appropriation,	$330.00	
Transfer from unappropriated funds,	70.00	$400.00

POOR DEPARTMENT—FUEL.

Dr.

Acushnet Saw Mill Co.,	$300.66	
Coggeshall, Charles W.	11.10	
Coggeshall, Maxfield & Co.,	5.75	
Corson, T. S.	951.44	
Dean, Henry N.	.65	
Duff & Son, D.	7.75	
Hawes & Brownell, trustees,	667.81	
Highways and streets, miscellaneous,	496.80	
Hart & Akin,	1,202.28	
Russell, John A.	15.75	
Richards, George D.	4.65	
Swan, Edward	13.40	$3,678.04

Cr.

By appropriation,	$2,475.00	
Transfer from unappropriated funds,	5.25	
Transfer from poor department, groceries,	7.85	
Transfer to balance,	670.19	$3,678.04

POOR DEPARTMENT—GROCERIES.

DR.

Acushnet Co-operative Association,	$472.50
Adams, George L.	15.00
Allen, Abram A.	16.00
Alley, A. G., Jr.,	64.50
Andre, Joseph	4.00
Armitage, William	12.00
Arsenault, R.	122.85
Baker, D. W.	22.00
Barlow & Co., J.	33.50
Bates & Co., J. W.	85.00
Bates, Lot B.	89.50
Beaudry & Co.,	4.50
Beaumont, Anson	3.50
Beaumont, A. & A. L.	16.50
Beaumont & Co., Anson	4.50
Bennett, William H.	34.00
Bennett & Co., William H.	14.00
Bliss & Son, F. C.	240.00
Bolles, Abram N.	32.00
Boston Beef Co.,	94.50
Bradford, William L.	51.00
Braley, F. J.	18.00
Braley, J. W., Jr.,	285.00
Brayton, George H.	63.00
Brightman, H. W.	8.00
Bromley, David	117.00
Brownell & Sons, C. H.	275.50
Burgess & Son, Thomas	112.00
Burke, William	22.00
Central Union Association,	799.57
Chappell, W. H.	47.00
Chausse, Joseph	172.50
Chicago Beef Co.,	26.00
Clark, Robert	218.00
Cummings, C. S. & B.	113.50
Dammon, F. A.	39.00
Davenport, Charles M.	18.00
Davenport, Dudley	400.00
Davenport, George E.	79.00
Davis, C. S.	73.50
Desroches, J. B.	12.00
Desautels, S.	68.00

Dick, John	$35.00
Driscoll, D. F.	15.00
Dugan, M.	169.00
Fernandes, Joseph H.	28.50
Folger, D. B.	280.00
Francis, John B.	214.50
Frasier, E. M.	168.00
Garant Bros.,	41.00
Genesky, Walter	13.75
Gillespie, Lawrence F.	55.00
Gray Bros.,	316.75
Greenhalgh, H.	16.00
Greenwood, John	9.00
Hammond, Herbert S.	220.00
Harrington, Daniel	15.00
Haworth, James	9.00
Hill, George	6.00
Hindle, William	82.00
Holcomb, Roland	28.50
Howland, Beriah G.	12.00
Hunter, George	218.50
Industrial Co-operative Association,	27.00
Jordan, Patrick	36.50
Lafrance, L. M.	80.50
Langlois, Valere	4.00
Law, Jesse	33.00
Lawton, Charles W.	14.50
Leavitt, Clark	70.00
Lefort, William H.	63.50
Lewis, O. B.	46.50
Lowe, John H.	150.00
Luce, Thomas E.	33.50
Luce, William T.	47.00
Luce, William T., Jr.,	28.00
Macomber, George W.	48.00
Macy, J. Roland	6.00
Marcoux, Didace	10.00
Marshall, Fred.	8.00
McDonnell Bros.,	19.50
Milliken, Lewis E.	70.50
Monte Pio Co-operative Association,	51.00
Morse, C. M., Jr.,	44.00
Murphy, Thomas J.	172.75
Notter, John	54.70
Nye, Alfred	90.00
O'Connor, W. C.	78.00

O'Neil, Josephine	$68.50	
Ostignay, Peter N.	37.50	
Patnaude, J. C.	39.50	
Peck & Co., A. L.	76.50	
Perry's Cash Store,	32.00	
Perry & Co., A. E.	30.50	
Perry, Charles F.	113.00	
Perry, Frank	10.00	
Phenix, P.	15.50	
Poirier, Charles R.	16.00	
Potter, E. L.	138.75	
Raymond, W. F.	52.00	
Riley, J. F.	52.00	
Robbins, W. A.	31.00	
Robinson, Daniel	60.00	
Rock, James	56.50	
Rose, David	144.00	
Russell, Allen, Jr.,	14.00	
Sisson, Jasper L.	2.00	
Sisson, J. S.	73.00	
Stanton, A. G.	39.00	
Stafford, George B.	29.00	
Slade, Caleb	178.50	
Snell, D. A.	2.00	
Spooner, E. F.	30.50	
Swift, E. B.	4.00	
Taber & Son, O. R.	18.00	
Taylor, J. C.	12.00	
Tomlinson, Thomas	12.00	
Tonge, William	14.00	
Tripp, Augustus C.	36.00	
Tripp, F. A.	8.50	
Vinal, Franklin H.	19.00	
Vera, Frank L.	2.00	
Washburn, A. R.	263.50	
Williams, M. S.	3.00	
Wilson, William T.	17.00	
Zimmerman, Fr.	43.00	$9,430.12
To transfers to poor department, fuel,		7.85
" " State hospitals,		128.78
" " furnishings and supplies,		194.46
" " incidentals and pay-rolls,		5.71
Transfer to balance,		1,239.79
		$11,006.71

CR.

By appropriation,	$1,650.00	
Transfer from unappropriated funds,	384.56	
Cash receipts, as per Treasurer's report,	8,972.15	$11,006.71

POOR DEPARTMENT—INCIDENTALS.

DR.

Anthony & Sons, E., incorp.,	$10.68	
Ashley, Isaac L.	12.00	
Bonty, Mary A.	5.00	
Briggs & Lawrence,	2.00	
Buchell Shoe House,	2.50	
Carter, William	.75	
Coggeshall, Maxfield & Co.,	1.50	
City Treasurer,	1,483.85	
Dammon, Samuel	.85	
Dews, Edwin	71.05	
Evening Journal Co.,	8.75	
Greenough & Co., W. A.	2.00	
Harris, E. T.	52.07	
Hayden, Eugene	19.00	
Hayden & Smith,	36.50	
Hutchinson & Co., H. S.	7.27	
Kirby & Hicks,	33.50	
Lawton, C. H. & H. A.	2.90	
Maine, H. M.	4.85	
Mercury Pub. Co.,	50.40	
N. B. Ice Co.,	8.74	
N. Y., N. H. & H. Railroad Co.,	149.23	
Old Colony Railroad Co.,	7.80	
Oleveriera, Capt. H. S.	55.00	
Penney, E. F.	5.80	
Perry & Son, S. F.	6.50	
Potter, Dr. William G.	1.58	
Purrington, Brown & Richards,	1.65	
Rodgers, A. M.	142.50	
Sherman & Son, C. R.	2.15	
Sherman, William H.	4.00	
Smith, Allen, Jr.,	2.75	
So. Mass. Telephone Co.,	109.72	
St. Luke's Hospital,	146.81	
Union Boot & Shoe Co.,	4.75	
Watkins, James B.	9.25	
Wing, C. F.	1.75	$2,467.40

CR.

By appropriation,	$1,761.37	
Transfer from unappropriated funds,	373.63	
Transfer to balance,	332.40	$2,467.40

POOR DEPARTMENT—SALARIES.

Dr.

Orrick Smalley, secretary,	$1,251.84	
Thomas H. Knowles,	150.00	
James E. Stanton,	150.00	
Ella F. Bucklyn, clerk,	699.96	
Dr. John T. Bullard,	8.88	
Dr. William G. Potter,	1,611.12	
A. A. Wood, assistant,	64.95	
Stephen P. Coffin, superintendent wood yard,	73.00	
Samuel Dammon, " "	304.00	$4,313.75
To transfer to balance,		1,151.25
		$5,465.00

Cr.

By appropriation,	$4,508.63	
Transfer from unappropriated funds,	956.37	$5,465.00

POOR DEPARTMENT—STATE HOSPITALS.

Dr.

Commonwealth of Massachusetts,	$431.71	
Mass. Hospital for Dipsomaniacs and Inebriates,	19.03	
Taunton Lunatic Hospital,	6,976.83	
Westborough Insane Hospital,	433.19	
Worcester Insane Asylum,	287.53	
Worcester Lunatic Hospital,	169.46	$8,317.75

Cr.

By appropriation,	$6,600.00	
Transfer from unappropriated funds,	1,400.00	
Transfer from poor department, groceries,	128.78	
Transfer to balance,	188.97	$8,317.75

POOR DEPARTMENT—ALMSHOUSE.

DR.

FURNISHING AND SUPPLIES:

Almy & Hitch,	$3.75
Anthony & Sons, E., incorp.,	6.00
Ashley & Peirce,	1.00
Blake, James E.	46.41
Bliss & Nye,	20.49
Borden, Charles M.	57.01
Borden, George B.	96.50
Bowen & Co., George S.	22.50
Briggs & Lawrence,	11.40
Brownell, Ashley & Co.,	115.54
Chase & Co., E. B.	2.50
Church, Charles H.	54.45
Corson, T. S.	621.54
Cronin, William	16.75
Cushing, C. F.	8.79
Davis & Co., J.	95.05
Delano, Gustavus	81.08
Devoll & Son, P.	44.05
DeWolf & Vincent,	24.14
Dean, Lafayette	15.00
Dews, Edwin	5.15
Diman, Henry B.	.22
Douglass, F. M.	39.45
Donaghy, Thomas	12.64
Faisneau, George S.	164.21
Fire department,	313.54
Gidley, Joseph B.	13.90
Greene & Wood,	5.08
Handy, Jona.	1.00
Hart & Co., T. M.	2.79
Hart & Akin,	535.70
Haskell & Tripp,	12.86
Hawes, Simeon	14.82
Hayes, N. P.	6.78
Hillman, Washburn & Co.,	39.52
Homer, George S.	12.00
Jenney & Son, P. P.	20.11
Kelley, William L.	10.15
Kennedy, Joseph P.	35.00
Kirby & Hicks,	30.00
Knowles & Co.,	86.33

Lawton, C. H. & H. A.	$114.47	
Leonard & Son, Samuel	10.00	
Lowe, James	15.00	
Lucas, A. E.	24.00	
Macy, Frederick	18.35	
Macy, W. J.	14.34	
Maine, H. M.	1.68	
Magoon, W. M.	2.00	
McCullough, John	17.94	
Mercury Pub. Co.,	6.00	
Moynan & Co.,	26.17	
Nichols & Damon,	23.35	
Paine & Bro., S. S.	12.02	
Pease, James H.	1.55	
Police department,	9.30	
Potter, E. L.	.60	
Purrington, Brown & Richards,	15.87	
Richards, George D.	11.95	
Roy & Fredette,	1.00	
Sanders & Barrows,	3.00	
Sherman, William D.	56.44	
So. Mass. Telephone Co.,	45.78	
Spare, J. V.	65.86	
Taber, Read & Gardner,	26.00	
Taylor & Son, H. J.	13.35	
Tillson, H. H.	17.90	
Tripp, S. A.	43.20	
Watkins, James B.	5.35	
Wilson, D W.	155.47	
Wilson & Wordell,	99.04	
Wing, Charles F.	44.97	
Wing & Co., J. & W. R.	140.75	
Wood, Brightman & Co.,	44.40	
Wright Drug Co.,	14.55	$3,806.85

CR.

By appropriation,	$2,062.50	
Transfer from unappropriated funds,	437.50	
Transfer from poor department, groceries,	194.46	
Transfer to balance,	1,112.39	$3,806.85

POOR DEPARTMENT—GRAIN AND PROVISIONS.

Dr.

Baylies, William	$543.79	
Brownell, E. C.	15.77	
Chadwick, E. E.	823.39	
Childs & Peckham,	59.77	
Cummings, C. S. & B.	108.48	
Davis & Hatch,	131.82	
Denison Bros. Co.,	537.79	
Driscol, Church & Hall,	1,269.14	
Macy, J. R.	144.12	
Potter & Co., William F.	245.95	
Richmond & Co., S. P.	17.93	
Sherman & Son, I. C.	11.50	
Snell, D. A.	5.49	
Snell & Co., D. A.	1.67	
Wing, Samuel	9.40	$3,926.01
To transfer to balance,		73.99
		$4,000.00

Cr.

By appropriation,	$3,300.00	
Transfer from unappropriated funds,	700.00	$4,000.00

POOR DEPARTMENT — INCIDENTALS AND PAY-ROLLS.

Dr.

Almshouse help,	$2,980.40	
Brightman, A.	15.60	
Chace, A. A., superintendent,	212.53	
Chace, A. A.	4.60	
Chace, Mrs. A. A., matron,	25.03	
Davis & Tripp,	9.00	
Jackson, Mrs. Ida	14.35	
Macy, P. S., superintendent,	637.50	
Macy, Mrs. P. S., matron,	75.00	
Mitchell, Rev. James R., chaplain,	3.00	
Raymond, Mary M.	15.00	
Williams, Rev. E.	173.00	$4,165.01

Cr.

By appropriation,	$2,887.50	
Transfer from unappropriated funds,	612.50	
Transfer from poor department, groceries,	5.71	
Transfer to balance,	659.30	$4,165.01

PRINTING, BINDING, AND STATIONERY.

Dr.

Andrews, A. R.	$3.00	
Anthony & Sons, E., incorp.,	1,751.08	
Clasp Envelope Co.,	3.00	
Catholic Union Pub. Co.,	142.54	
Dews, Edwin	1,445.74	
Dick Co., A. B.	.52	
Engineering News Pub. Co.,	23.00	
Evening Journal Co.,	686.00	
Fox, George S., agent,	2.00	
Hobbs & Co., Samuel	83.25	
Hutchinson & Co., H. S.	.70	
Mercury Pub. Co.,	3,350.46	
Sanson's Lime Pen Co.,	2.50	
Sherman & Son, C. R.	4.50	
Taber, Robert W.	20.08	$7,518.37

Cr.

By appropriation,	$5,197.50	
Special appropriation,	1,102.50	
Transfer to balance,	1,218.37	$7.518.37

PUBLIC SCHOOLS—PAY OF TEACHERS.

Dr.

HIGH SCHOOL.

Ray Greene Huling,	$1,650.00	
Charles Sturtevant Moore,	1,100.00	
Charles T. Bonney, Jr.,	1,600.00	
Charles R. Allen,	1,465.00	
Sarah D. Ottiwell,	960.00	
Elizabeth P. Briggs,	900.00	
Lydia J. Cranston,	900.00	
Mary E. Austin,	900.00	
Lucretia N. Smith,	900.00	
Emma K. Shaw,	897.60	
Helen L. Hadley,	765.20	
Mabel W. Cleveland,	770.00	
Catharine M. Crabtree,	670.00	
John K. McAfee,	288.75	$13,766.55

GRAMMAR SCHOOLS.

Fifth Street:

Allen F. Wood,	$1,900.00	
Mary A. Kane,	598.00	
Sarah E. Stoddard,	587.00	
Mary E. Allen,	600.00	
Lydia A. Macreading,	600.00	
Janet Hunter,	600.00	
Emma A. McAfee,	598.00	
Harriet F. Hart,	568.50	
Nancy H. Brooks,	484.00	
Blanche W. Sheldon,	564.00	
Grace L. Carver,	520.00	7,619.50

Middle Street:

George H. Tripp,	$1,900.00	
Katharine Commerford,	562.00	
Mary R. Hinckley,	342.00	
Agnes J. Dunlap,	450.00	
Clara S. Vincent,	598.00	
Lucy B. Fish,	597.00	
Clara B. Watson.	576.00	
Maria B. Clark,	600.00	
Etta M. Abbott,	598.00	
Julia C. Gifford,	460.00	
Helen Ring,	240.00	6,923.00

PARKER STREET:

Charles E. E. Mosher,	$1,140.00	
Francis J. Heavens,	570.00	
Martha A. Hemenway,	600.00	
Anna L. Jennings,	660 00	
Mary W. Leymunion,	181.00	
Mary E. Sturtevant,	587.00	
May L. Pettey,	354.00	
Mariana N. Richmond,	600.00	
Helen Ring,	360.00	
Elizabeth B. Brightman,	597.00	
Emily A. Delano,	585.00	
Lizzie E. Omey,	136.00	
Susan H. Lane,	560.00	
Regina M. Paul,	443.75	
Emma D. Larrabee,	549.00	$7,922.75

THOMPSON STREET:

Katharine N. Lapham,	$1,194.00	
Mary A. Macy,	600.00	
Elizabeth Bennett,	282.88	
Cora B. Cleveland,	485.00	
Daisy M. Butts,	485.00	
Lena B. Hamblin,	517.60	
Charlotte M. Allen,	250.62	
Lizzie M. Briggs,	180.05	
Annie L. Brownell,	162.50	4,157.65

PRIMARY SCHOOLS.

WILLIAM STREET:

Eleanor Commerford,	$337.60	
Carrie E. Footman,	240.00	
Amelia Lincoln,	550.00	
Mary J. Graham,	550.00	
Kate E. Cleary,	192.50	
Helen J. Kirk,	248.33	2,118.43

LINDEN STREET:

Elizabeth P. Spooner,	$532.00	
Lucy S. Leach,	500.75	
Isabella Luscomb,	550.00	
Isadora Foster,	492.20	
Anna I. Dexter,	125.00	
Ruth M. Tripp,	138.00	2,337.95

MERRIMAC STREET:		
Sarah H. Hewins,	$600.00	
Addie West,	550.00	
Harriet S. Damon,	538.80	
Anna I. Dexter,	393.40	$2,082.20
MAXFIELD STREET:		
Mary B. White,	$600.00	
Annie E. Pearce,	550.00	
Clara C. M. Gage,	546.80	
Mary E. Pasho,	470.00	2,166.80
CEDAR STREET:		
Annie S. Homer,	$650.00	
Abby D. Whitney,	550.00	
Bessie P. Peirce,	550.00	
Willetta B. Nickerson,	549.52	
Annie L. Edwards,	550.00	
Mabel L. Hathaway,	414.20	3,263.72
ACUSHNET AVENUE:		
Jane C. Thompson,	$700.00	
Sarah E. Kirwin,	329.20	
Susan M. Lucas,	245.10	
Harriet L. Finlan,	547.20	
Carrie S. Silva,	533.40	
Margaret H. Holmes,	397.75	
Harriet N. Hyatt,	398.00	
Julia M. Pilling,	403.60	
Harriet L. Cornell,	386.72	
Annie King,	169.12	
Elizabeth Bennett,	190.12	4,300.21
I. W. BENJAMIN:		
Jane E. Gilmore,	$782.50	
Susan M. Tompkins,	543.60	
Annie C. O'Connor,	550.00	
Helen J. Kirk,	192.50	
Nellie W. Davis,	543.60	
Mary C. Barstow,	314.08	
Sarah A. Winslow,	503.20	
Annie L. Brownell,	305.90	
Rachel L. Denham,	155.90	
Alice A. Taylor,	470.00	
Mabel A. Bennett,	435.00	
Eleanor V. Tripp,	435.00	

Charlotte M. Allen,	$159.38	
Julia A. Hunt,	161.60	
Dora A. DeWolf,	270.00	
Lizzie M. Briggs,	100.00	
Emma L. Gartland,	104.00	
Sarah E. Kirwin,	220.00	$6,246.26
FOURTH STREET:		
Sarah H. Cranston,	$650.00	
Eliza H. Sanford,	548.40	
Sarah E. Sears,	486.35	
Lillie C. Tillinghast,	545.20	
Annie L. Macreading,	535.00	
Grace Covell,	404.80	3,169.75
DARTMOUTH STREET:		
Isadore F. Eldridge,	$683.40	
M. Eva Schwall,	550.00	
Sara H. Kelley,	536.40	
Grace H. Potter,	535.05	
Annie F. Smith,	449.20	
Edith M. B. Taber,	435.00	
Nellie H. Cook,	363.77	
Mary C. Barstow,	220.12	3,772.94
CEDAR GROVE STREET:		
Lucy F. Clark,	$751.23	
Mary J. Eldridge,	550.00	
Carrie A. Shaw,	542.00	
Flora E. Estes,	550.00	
Annie G. Brawley,	531.80	
Edith K. Weeden,	459.60	
Sara M. Hatch,	325.28	
Kate Sweet,	157.50	
Caroline E. Bonney,	330.40	
Lizzie E. Omey,	432.50	
Alice A. Richardson,	170.00	
Mary W. Leymunion,	150.00	
Ruth E. Pease,	260.00	
Isabel Horr,	64.00	5,274.31
CANNONVILLE:		
Adelaide J. McFarlin,	$550.00	
Ethel W. Denham,	404.40	954.40

UNGRADED SCHOOLS.

NORTH MILL:

Emma R. Wentworth,	$657.50	
Kate Sweet,	351.87	
Mary L. Hillman,	138.00	$1,146.37

SOUTH MILL:

Lucy J. Remington,	$697.50	
Ruby M. Tripp,	424.00	1,121.50

ACUSHNET:

Charlotte C. Carr,	$700.00	
Caroline O. Pierce,	550.00	
Belle B. Wheeler,	570.00	1,820.00

CLARK'S POINT:

Julia A. Fay,	$104.32	
Emma L. Gartland,	192.00	
Mary E. McAuliffe,	121.50	417.82

NORTH:

Mary I. Ashley,	$600.00	
Agnes E. Braley,	294.40	894.40

PLAINVILLE:

Mary E. Haney,	$545.00	545.00

ROCKDALE:

Amelia F. Keen,	$360.00	
Lillian T. Thomas,	200.00	
Alice P. Terry,	32.00	592 00

SPECIAL TEACHERS.

DRAWING:

Mary W. Gilbert,	$1,200.00	1,200.00

MUSIC:

F. H. Butterfield,	$1,700.00	1,700.00

SEWING:

Carrie H. Richmond,	$568.69	
Gertrude H. Leonard,	460.20	
Eliza A. Smalley,	291.78	$1,320.67

COOKING:

Grace Greenwood,	$180.00	180.00

HARRINGTON TRAINING SCHOOL.

Josephine B. Stuart,	$1,380.00	
Anna W. Braley,	910.00	
Belle M. Almy,	435.00	
Fannie M. Spooner,	410.00	
Dora A. DeWolf,	140.00	
Ruth E. Pease,	150.00	
Annie M. King,	236.00	
Caroline E. Bonney,	16.00	
Emma L. Gartland,	16.00	
Julia A. Hunt,	63.20	
Angela F. Bowie,	122.00	
Julia W. Corish,	215.80	
Kate Moore,	225.40	
Annie L. Burbank,	44.25	
Alice A. Richardson,	86.60	
Grace W. Russell,	227.00	
Lillian T. Thomas,	78.70	
Florence A. Poole,	244.70	
Ruth M. Tripp,	67.20	
Elizabeth C. Read,	37.50	
Marion H. Swasey,	102.20	
Sarah E. Slade,	45.90	
Amelia F. Keen,	3.00	5,256.45

EVENING ELEMENTARY SCHOOLS.

FIFTH STREET:

Oliver W. Cobb,	$108.00
Mrs. C. T. Johnson,	67.59
Grace H. Potter,	65.96
Nancy H. Brooks,	31.59
Annie F. Smith,	17.86
Lillie C. Tillinghast,	36.00

Clara B. Watson,	$30.00	
Alice A. Taylor,	66.09	
Kate Moore,	68.96	
Nellie H. Cook,	68.96	
Cora G. Bingley,	32.96	
Belle Almy,	31.59	
Annie C. Hart,	36.00	
Mary J. Graham,	36.00	
Sarah E. Stoddard,	68.96	
Lizzie M. Briggs,	68.96	
Julia C. Gifford,	68.96	
Grace W. Russell,	55.59	
Annie L. Burbank,	68.96	
Mary C. Barstow,	6.86	
Eleanor V. Tripp,	1.50	
Rachel L. Denham,	6.87	
Annie L. Brownell,	1.37	
Elizabeth C. Read,	1.37	
Edith M. V. Taber,	1.37	$1,048.33

Merrimac Street:

Mary A. Kane,	$144.00	
Alice A. Richardson,	64.84	
Harriet L. Cornell,	67.46	
Mabel L. Hathaway,	68.96	
Anna I. Hathaway,	32.96	
Charlotte M. Allen,	66.22	
Sarah E. Kirwin,	67.59	
Florence A. Poole,	68.96	
Mary J. Eldridge,	5.49	
Hattie A. Taylor,	30.00	
Blanche W. Sheldon,	1.37	
Leona M. Bosworth,	24.72	
Elizabeth Bennett,	1.37	643.94

Parker Street:

George H. Tripp,	$144.00	
Grace C. Bates,	32.96	
Leona M. Bosworth,	8.24	
M. Anna Taber,	31.59	
Mary F. Wilde,	68.96	
Annie Murphy,	4.12	
Regina M. Paul,	32.96	
Julia W. Corish,	68.96	
Sara L. Tallman,	36.00	

Hattie A. Taylor,	$3.00	
Belle Almy,	3.00	
Maria B. Clark,	36.00	
Emma D. Larrabee,	30.00	
Mary E. McAuliffe,	3.00	
Lucy B. Fish,	6.00	
Emma R. Wentworth,	27.00	
Helen McCoy,	3.00	$538.79

CEDAR GROVE STREET:

Allen F. Wood,	$198.00	
Zenas M. Briggs,	67.59	
Annie G. Brawley,	66.34	
Nannie P. Slocum,	91.71	
Mrs. J. E. Edwards,	32.96	
Mary R. Hinckley,	67.48	
Abby R. Johnson,	58.59	
Flora E. Estes,	68.96	
Isabel S. Horr,	4.12	
Mrs. Myra S. Ashley,	62.96	
Mrs. Harriet B. S. Wilcox,	31.59	
Grace L. Carver,	64.84	
Marion H. Swasey,	1.37	
Emma A. McAfee,	55.10	
Cora G. Bingley,	60.00	
Mary E. McAuliffe,	33.00	
Anna I. Hathaway,	60.00	
Emma B. McCullough,	49.50	
Dora A. DeWolf,	36.00	
Robert E. Washburn,	34.50	
Laura M. Pease,	6.00	
Helen McCoy,	12.00	
Grace L. Bates,	57.00	
Lizzie D. Hicks,	24.00	
Lucia E. Bliss,	24.00	
Blanche W. Sheldon,	27.00	1,294.61

THOMPSON STREET:

Joseph P. Kennedy,	$144.00	
Mrs. S. C. Whelden,	68.96	
Janet Hunter,	67.46	
Emma L. Gartland,	68.96	
Annie M. King,	60.72	
Caroline E. Bonney,	32.96	

Helen Ring,	$34.50	
Lena B. Hamblin,	31.59	
Mrs. K. E. Kirwin,	36.00	
Julia A. Hunt,	44.24	
Daisy M. Butts,	1.37	
Alice Comey,	30.00	
Marion H. Swasey,	30.00	
Belle Almy,	31.50	
Mrs. Annie Murphy,	24.00	
Mrs. Alice Perkins,	27.00	$733.26
EVENING DRAWING SCHOOL:		
George H. Nye,	$171.00	
George A. Stetson,	136.50	
Catharine M. Crabtree,	117.00	
Frank C. Taylor,	56.00	480.50

SUBSTITUTES.

Myra S. Ashley,	$106.40
Nancy M. Bragg,	100.00
Lizzie M. Briggs,	161.00
Caroline E. Bonney,	13.20
Elizabeth Bennett,	10.00
Angela F. Bowie,	31.20
Annie L. Burbank,	129.28
Carrie Chapman,	97.00
Julia W. Corish,	35.40
Grace Covell,	27.00
Clara M. Diman,	6.00
Rachel L. Denham,	9.60
Hattie L. Finlan,	2.80
Emma L. Gartland,	25.20
Harriet S. Gardner,	31.20
Helen M. Gordon,	73.50
Mary L. Hillman,	20.80
Harriet N. Hyatt,	4.00
Julia A. Hunt,	51.80
Harriet F. Hart,	21.00
Margaret H. Holmes,	29.25
Mary R. Hinckley,	97.00
Kate Kirwin,	32.80
Kate Moore,	29.00
Helen McCoy,	68.75
C. M. Murkland,	5.20
Emma B. McCullough,	64.00

Annie Murphy,	$9.60	
Laura M. Pease,	50.00	
Julia M. Pilling,	4.80	
Florence A. Poole,	8.80	
Elizabeth C. Read,	65.60	
Grace W. Russell,	41.60	
Mabel Spooner,	20.00	
Marion H. Swasey,	40.40	
Nannie P. Slocum,	30.00	
Marion G. Smith,	52.80	
Sarah E. Sears,	41.25	
Sarah Slade,	3.20	
Lillian T. Thomas,	21.80	
Ruth M. Tripp,	20.80	
L. A. Taber,	46.00	
Isabella F. Winslow,	41.25	$1,780.28
		$98,791.34
To transfer to public schools, office salaries,		500.00
		$99,291.34

Cr.

By appropriation,	$79,200.00	
Special appropriation,	16,800.00	
Transfer from unappropriated funds,	3,250.00	
Transfer to balance,	41.34	$99,291.34

PUBLIC SCHOOLS—BOOKS, STATIONERY, AND SUPPLIES.

Dr.

Allen, Edwin	$1.00	
American Book Co.,	441.77	
Anthony & Sons, E., incorp.,	35.00	
Boston School Supply Co.,	112.50	
Devol & Reynolds Co.,	13.50	
Dews, Edwin	5.00	
Eimer & Amend,	54.59	
Frost & Adams,	17.40	
Gibbs, Elizabeth L.	4.80	
Ginn & Co.,	216.13	
Gray, Charles A.	18.68	
Hatch & Co.,	7.65	
Heath & Co., D. C.	98.34	
Holden Patent Book Cover Co.,	146.39	
Hutchinson & Co., H. S.	1,267.09	
Jennings, W. A.	61.50	
Kane & Bro., D. J.	169.92	
Lee & Shepard,	25.00	
Mercury Pub. Co.,	56.50	
Perry & Co., George S.	217.10	
Prang Educational Co.,	475.71	
Putnam's Sons, G. P.	12.00	
Sherman & Son, C. R.	2.40	
Taber, Robert W.	2.59	
Thompson, Brown & Co.,	94.38	
University Pub. Co.,	2.75	
Ware & Co., William	393.01	
Watrous, Joseph	96.25	$4,048.95
To transfer to balance,		351.05
		$4,400.00

Cr.

By appropriation,	$3,630.00	
Transfer from unappropriated funds,	770.00	$4,400.00

PUBLIC SCHOOLS — DARTMOUTH STREET SCHOOL HOUSE.

Dr.

Jenney & Buffington,	$21.22	
Perry & Co., George S.	8.17	
Tripp, Henry W.	952.67	
Tripp, S. A.	210.86	$1,192.92
To transfer to balance,		182.08
		$1,375.00

Cr.

By transfer from incidentals,	$1,375.00

PUBLIC SCHOOLS—FURNISHING KEMPTON STREET SCHOOL HOUSE.

Dr.

Briggs & Lawrence,	$8.75	
Chace, Ezra B.	161.74	
Corson, T. S.	201.08	
Donaghy, Thomas	18.75	
Gray, Charles A.	23.29	
Hart & Akin,	3.90	
Hillman, Washburn & Co.,	56.86	
Kelley, William L.	37.00	
N. B. Gas & Edison Light Co.,	11.00	
Perry & Co., George S.	360.46	
Purrington, Brown & Richards,	15.95	
Sowle & Co., F. L.	4.35	
Taber, Robert W.	19.59	
Taylor & Son, H. J.	1.24	
Tripp, S. A.	11.05	
Winchester Furniture Co.,	258.00	
Wing, Charles F.	106.99	$1,300.00

Cr.

By transfer from unappropriated funds,	$1,300.00

PUBLIC SCHOOLS—I. W. BENJAMIN SCHOOL.

DR.

Greene, Marshall S.	$64.42	
Meaney, John J.	224.19	
Perry & Co., George S.	57.75	$346.36
To transfer to balance,		3.64
		$350.00

CR.

By transfer from incidentals,	$350.00

PUBLIC SCHOOLS—FUEL.

DR.

Ashley, Mary I.	$9.50	
Corson, T. S.	3,658.94	
Hart & Akin,	3,175.25	
Hawes, S. T.	8.10	
Jones, Edwin	2.00	
Notter, John	5.00	
O'Brien, John N.	16.25	
Phillips, Lawson	140.76	
Sylvia, John	9.00	
Tompkins, I. B., Jr.,	8.00	
Tripp, LeRoy G.	10.00	$7,042.80
To transfer to public schools, printing and incidentals,		421.29
To transfer to public schools, lighting schools,		5.00
		$7,469.09

CR.

By appropriation,	$4,950.00	
Transfers from unappropriated funds,	2,273.87	
Transfer to balance,	245.22	$7,469.09

PUBLIC SCHOOLS—JANITORS, DAY AND EVENING.

DR.

Arnett, Robert, Jr.,	$713.46	
Ashley, Mary I.	85.50	
Baker, William A.	138.45	
Barbour, John R.	386.00	
Barnum, Stephen G.	509.61	
Carpenter, Samuel	611.53	
Corish, John	809.46	
Fay, Julia	44.00	
Hayes, Loring G.	496.79	
Heron, James T.	809.46	
Jones, Addie	85,61	
Jones, Edwin	335.70	
Lumbert, John	611.53	
Manchester, Charles H.	44.42	
Marble, John	21.14	
Phillips, Henry T.	809.46	
Pollock, Frederick O.	870.58	
Poole, Philip	43.40	
Potter, George A.	81.19	
Sylvia, John	290.86	
Tallman, Edwin S.	815.38	
Tilton, William J.	305.76	
Tripp, LeRoy G.	713.46	
White, Albert P.	707.53	
Wood, James A.	1,079.23	
Bell ringers,	32.60	$11,452.11

CR.

By appropriation,	$9,075.00	
Transfer from unappropriated funds,	1,925.00	
Transfer to balance,	452.11	$11,452.11

PUBLIC SCHOOLS—KEMPTON STREET COOKING SCHOOL.

Dr.

Alley, A. G., Jr.,	$10.70	
Baker, William A.	1.04	
Chace, Ezra B.	5.40	
Corson, T. S.	9.85	
Damrell & Upham,	13.98	
Delano, F. E.	175.53	
Gardner & Southwick,	29.71	
Hillman, Washburn & Co.,	3.00	
Kelley, William L.	5.50	
Mercury Pub. Co.,	38.68	
N. B. Gas & Edison Light Co.,	25.44	
Perry & Co., George S.	47.50	
Purrington, Brown & Richards,	120.77	
Taber, Robert W.	2.62	
Tripp, S. A.	54.10	
Whiting & Co., E. B.	7.83	
Wing, Charles F.	9.45	$561.10
Jan. 1, 1894. To balance,		38.90
		$600.00

Cr.

By transfer from incidentals,	$600.00

Cr.

Jan. 1, 1894. By balance,	$38.90

PUBLIC SCHOOLS—LIGHTING THE SCHOOLS.

Dr.

N. B. Gas & Edison Light Co.,	$1,304.07	
To transfer to public schools, printing and incidentals,	402.85	$1,706.92

Cr.

By appropriation,	$825.00	
Transfers from unappropriated funds,	652.49	
Transfers from public schools, fuel,	5.00	
Transfer to balance,	224.43	$1,706.92

PUBLIC SCHOOLS—OFFICE COAL AND RENT.

Dr.

Corson, T. S.	$50.56	
Dennis, Valariah	499.95	
Hart & Akin,	37.31	
Phillips, Lawson	12.24	$600.06

Cr.

By appropriation,	$495.00	
Transfer from unappropriated funds,	105.00	
Transfer to balance,	.06	$600.06

PUBLIC SCHOOLS—OFFICE SALARIES.

Dr.

William E. Hatch, superintendent and secretary,	$3,057.69	
Emma M. Almy, clerk,	863.46	
Henry Smith, truant officer,	813.46	
George K. Dammon, janitor,	815.38	$5,549.99
Transfer to balance,		103.87
		$5,653.86

Cr.

By appropriation,	$3,630.00	
Transfer from public schools, pay of teachers,	500.00	
Transfer from public schools, repairs of buildings and furniture,	753.86	
Transfer from unappropriated funds,	770.00	$5,653.86

PUBLIC SCHOOLS — PRINTING AND INCIDENTALS.

Dr.

Acushnet Co-operative Association,	$5.34
Almy & Hitch,	7.50
American Bank Note Co.,	52.50
Anthony & Sons, E., incorp.,	161.07
Anthony, Sophie T.	15.00
Arnett, Robert, Jr.,	10.63
Ashley, Mary I.	30.75
Atwood, Herbert M.	9.00
Bailey, George	126.00
Baker, William A.	2.70
Blake, James E.	.45
Bliss, George	13.40
Bliss & Nye,	5.90
Briggs & Lawrence,	53.85
Bryant & Brett,	1.50
Carson, C. J. R.	10.00
Chace, Ezra B.	354.26
Clarke, Lothrop	5.65
Cook & Smith,	150.00
Corish, John	3.69
Cummings, C. S. & B.	.45
Dammon, George K.	7.40
Delano's Sons, George	4.00
DeWolf & Vincent,	32.61
Dews, Edwin	16.29
Dobson, George	6.60
Donaghy, Thomas	3.50
Douglass, F. M.	6.05
Driscol, Church & Hall,	3.60
Duddy, James	3.00
Evening Journal Co.,	51.28
Faisneau, George E.	4.50
First Primitive Methodist Church,	162.50
Freetown, town of	25.00
Gammons, Edgar H.	31.00
Gifford & Co., T. J.	.50
Gleason, James	10.00
Gray, Charles A.	43.43
Handy, Caleb	3.55
Hart & Co., T. M.	3.47
Hart & Akin,	5.43
Haskell & Tripp,	25.29

Haskins, Charles N.	$1.75
Haskins & Sons, O.	11.16
Hatch & Co.,	2.20
Hatch, George E.	1.50
Hathaway, A. B.	10.00
Hathaway, George B.	25.00
Hayden, W. G.	1.62
Hayes, N. P.	19.94
Heron, James T.	10.37
Hersom & Co., Thomas	2.50
Hickey, M. A.	3.45
Hitch, Hardy, Jr.,	1.25
Hillman, Washburn & Co.,	41.30
Hoyt, George S.	25.00
Hutchinson & Co., H. S.	8.38
Jenney, B. F.	1.00
Jenney & Son, P. P.	8.94
Jennings, W. A.	90.25
Jones, Edwin	4.57
Kern & Wright,	2.25
Lowe, S. C.	35.95
Lowe, W. A.	4.90
Macy, J. Roland	.50
Mandell, S. G.	81.25
Maxfield & Son, William	13.81
McFarlin, James	1.50
Mercury Pub. Co.,	308.21
Moulton, A. G.	12.75
N. B. Cordage Co.,	.30
N. B. Ice Co.,	1.35
N. B. Steam Carpet Beating Establishment,	11.81
Peirce, E. M.	2.00
Perry, H. C.	3.65
Perry, George S.	20.61
Perry & Co., George S.	961.72
Perry & Son, S. F.	.50
Phillips, Henry T.	6.42
Pollock, F. O.	18.38
Poole, Philip S.	6.00
Pope, A. P.	27.10
Potter, E. L.	2.91
Purrington & Brown,	7.10
Purrington, Brown & Richards,	79.22
Richards, George D.	178.14
Sherman, James L.	2.44
Sherman & Son, C. R.	10.20

Sherman, William H.	$16.50	
Silvia, John	.65	
Sisson & Ring,	5.60	
Slocum, F. R.	6.30	
Sowle & Co., F. L.	12.31	
Spare, J. V.	2.50	
Sullivan, D. J.	5.50	
Taber, Robert W.	40.48	
Tallman, Edwin S.	5.43	
Taylor & Son, H. J.	8.48	
Tilton, W. J.	2.67	
Tripp, LeRoy G.	8.46	
Tripp, S. A.	9.45	
West, William R.	20.05	
White, A. P.	29.23	
Whiting & Co., E. B.	1.50	
Wilbur, S. S.	26.17	
Wing, C. F.	131.27	
Wood, James A.	24.15	
Wright Drug Co.,	7.50	$3,903.99

CR.

By appropriation,	$495.00	
Cash receipts, as per Treasurer's report,	21.36	
Transfer from unappropriated funds,	1,680.55	
" public schools, lighting,	402.85	
" " fuel,	421.29	
" " repairs of buildings and furniture,	450.00	
Transfer to balance,	432.94	$3,903.99

PUBLIC SCHOOLS — REPAIRS OF BUILDINGS AND FURNITURE.

DR.

Arnett, Robert, Jr.,	$.30
Ashley, Mary I.	7.70
Atwood, Herbert M.	25.55
Bertram, John	135.00
Brightman, Charles O.	39.20
Chace, Ezra B.	59.62
Chase, Charles F.	5.70
Coggeshall, Maxfield & Co.,	18.40
Davis, Z. B.	18.05
Deane, Thomas	6.00
Ennis, John H.	41.99
Faunce, Loum H.	75.57
Gifford & Co., T. J.	.75
Greene, Marshall S.	33.43
Greene & Wood,	2.52
Gurney, Frank J.	57.62
Hart & Akin,	146.03
Haskins & Sons, O.	172.87
Hatch, George E.	60.26
Hathaway, A. B.	7.75
Hathaway & Son, D. L.	93.88
Hazzard, James B.	31.68
Hayden, W. G.	23.10
Hickey, M. A.	134.74
Highways and streets, miscellaneous,	26.07
Holmes, D. W.	278.79
Jenney & Buffington,	48.50
Karcher, Herman	4.78
Kelley, William L.	1.50
Kern & Wright,	5.00
Lewis, B. F.	313.32
Lloyd, Llewelyn	99.34
Lowe, S. C.	166.94
Lowe, W. A.	255.66
Magnett & Allen,	58.20
Mason, J. L. G.	4.29
Maxfield & Son, William	181.97
Meaney & Connolly,	72.97
Miller & Hook,	26.22
Moriarty Bros.,	.50
Moriarty, T. J.	.60

Morton, E. F.	$34.75	
O'Hearne, William	11.00	
Paisler, C. S.	.65	
Peirce, William	17.15	
Penney, E. F.	95.75	
Perkins & Chase,	3.00	
Phillips, H. T.	175.25	
Poole, Philip S.	1.24	
Pope, A. P.	77.15	
Potter, George A.	3.90	
Sherman & Son, R. A.	1,246.79	
Silvia, John	2.25	
Sowle, Nat. P.	1.35	
Stanton, A. G.	14.37	
Sturtevant Bros.,	176.84	
Sturtevant, William F.	108.65	
Sullivan, D. J.	19.25	
Sullivan, John B.	4.36	
Swift, P. R.	100.15	
Thompson, Charles	91.90	
Tripp, Henry W.	74.50	
Tripp, Hiram C.	15.56	
West, J. H. W.	4.40	
West, William R.,	331.16	
Wood, Brightman & Co.,	856.71	$6,210.44
To transfer to public schools, printing and incidentals,		450.00
To transfer to public schools, office salaries,		753.86
Transfer to balance,		585.70
		$8,000.00

Cr.

By appropriation,	$6,600.00	
Transfer from unappropriated funds,	1,400.00	$8,000.00

PUBLIC SCHOOLS — REPAIRS OF HEATING APPARATUS.

DR.

Arnett, Robert, Jr.,	$.85	
Ashley, Mary I.	.75	
Babbitt, Wood & Co.,	1.41	
Greene, Marshall S.	7.77	
Hatch, George E.	51.53	
Hillman, Washburn & Co.,	2.90	
Holmes, D. W.	12.07	
Lowe, S. C.	100.36	
Mason, J. L. G.	4.57	
Miller & Hook,	18.68	
N. B. Boiler & Machine Co.,	91.29	
Parker, Warren W.	1.75	
Sherman & Son, R. A.	7.43	
Smead Warming & Ventilating Co.,	.91	
Sylvia, Antonio A.	1.50	
Taber, Robert A.	23.13	
Tompkins, I. B., Jr.,	4.50	
Tripp, S. A.	430.08	
Wilson, D. W.	1,035.04	
Wood, Brightman & Co.,	51.01	$1,847.53

CR.

By appropriation,	$430.65	
Transfer from unappropriated funds,	1,173.98	
Transfer to balance,	242.90	$1,847.53

PUBLIC SCHOOLS—TELEPHONES.

DR.

So. Mass. Telephone Co.,	$128.00

CR.

By appropriation,	$105.60	
Transfer from unappropriated funds,	22.40	$128.00

PUBLIC SCHOOLS — MANUAL TRAINING SCHOOL.

DR.

Kelley, William L.	$5.50	
Wing, Charles F.	6.07	$11.57
Jan. 1, 1894. To balance,		988.43
		$1,000.00

CR.

By transfer from incidentals,	$1,000.00

CR.

Jan. 1, 1894. By balance,	$988.43

PUBLIC SCHOOLS—DOG FUND.

Dr.

Allen's Express,	$1.00	
Allen, Luke	62.50	
Bliss & Nye,	2.50	
Case, E. C.	1.36	
Derby, Kilmer & Pond Desk Co.,	216.20	
Donavan, M. E.	25.14	
Gray, Charles A.	2.54	
Handy Tape Co.,	6.50	
Haskell & Tripp,	23.08	
Hatch & Co.,	3.40	
Hatch, William E.	250.00	
Hutchinson & Co., H. S.	4.34	
Mercury Pub. Co.,	9.25	
Perry & Co., George S.	165.62	
Phillips, Henry T.	100.00	
Purrington, Brown & Richards,	4.75	
Richards, George D.	3.60	
Sherman, William H.	25.50	
Tompkins, Isaac B.	62.50	
Tompkins, Isaac B., Jr.,	25.38	
Weeden, George	50.00	
White, Albert P.	50.00	$1,095.16
Jan. 1, 1894. To balance,		3,306.28
		$4,401.44

Cr.

Jan. 2, 1893. By balance,	$3,195.04	
Cash receipts, as per Treasurer's report,	1,206.40	$4,401.44

Cr.

Jan. 1, 1894. By balance,	$3,306.28

REAL ESTATE TAX ACCOUNT.

DR.

Jan. 2, 1893. To balance,	$479.34	
Collector of Taxes,	246.24	$725.58

CR.

By cash receipts, as per Treasurer's report,	$42.64	
Jan. 1, 1894. By balance,	682.94	$725.58

DR.

Jan. 1, 1894. To balance,	$682.94

REPAIRS OF CITY PROPERTY.

DR.

ALMSHOUSE:		
Ballou, Jason L.	$502.52	
Briggs & Lawrence,	73.89	
Hillman, Washburn & Co.,	12.10	
Miller & Hook,	11.54	
Sherman & Son, R. A.	16.52	
Wilson, D. W.	56.99	$673.56
BOARD OF HEALTH:		
Briggs & Lawrence,	$418.37	
Kelley & Son, J. S.	14.50	
Otheman & Dunham,	11.70	
Sherman & Son, R. A.	207.75	
Sisson & Ring,	33.55	
Taylor & Son, H. J.	10.81	
Thompson, Charles	8.00	
Wing, C. F.	207.49	912.17
CITY HALL:		
Briggs & Lawrence,	$21.04	
Brightman, Charles O.	62.79	
Coggeshall, Maxfield & Co.,	26.46	
Hart & Co., T. M.	5.12	
Hart & Akin,	40.89	
Hatch, George E.	27.54	
Highways and streets,	3.00	
Laughton, Mrs.	2.00	
Mason, J. L. G.	15.28	
Maxfield & Son, William	126.09	
N. B. Gas & Edison Light Co.,	9.39	
Parker, Warren W.	55.50	
Pell, Walter D.	11.00	
Penney, E. F.	9.97	
Piper, D. M.	3.75	
Sherman & Son, R. A.	37.01	
Sisson & Ring,	3.00	
Wady, A. B.	1.50	
Wing, C. F.	104.62	
Wood, Brightman & Co.,	23.85	589.80
CITY WOOD AND COAL YARD:		
Bosworth, William,	$48.64	48.64

ENGINE HOUSES:

Brightman, Charles O.	$181.44	
Hayes & Co.,	5.10	
Hickey, M. A.	196.10	
Highways and streets,	884.49	
Kern & Wright,	26.15	
Lloyd, Llewelyn	223.00	
N. B. Water Works,	4.30	
Sherman & Son, R. A.	124.18	
Wing, C. F.	.66	$1,645.42

LIBRARY BUILDING:

Brightman, Charles O.	$572.56	
Coggeshall, Maxfield & Co.,	13.59	
Gifford & Co., T. J.	1.20	
Hart & Akin,	527.23	
Haskell, E. S.	16.75	
Hathaway, A. E.	8.30	
Hayes, N. P.	18.90	
Highways and streets,	4.82	
Hitch, Hardy, Jr.,	5.50	
Lloyd, Llewelyn	17.63	
Maxfield & Son, William	1.43	
McAuliffe, D. J.	21.34	
N. B. Boiler & Machine Co.,	11.17	
N. B. Gas & Edison Light Co.,	113.62	
Pope, A. P.	64.48	
Sherman & Son, C. R.	10.85	
Sherman & Son, R. A.	2.30	
Sullivan, Martin H.	59.65	
Taber, Robert A.	7.48	
Wood, Brightman & Co.,	61.95	1,540.75

POLICE STATIONS:

Brightman, C. O.	$79.73	
Caswell, William H.	2.28	
Faunce & Johnson,	119.39	
Highways and streets,	39.75	
Kelley & Son, J. S.	4.50	
Labebre, Joseph	15.00	
Mahoney, T. E.	36.20	
Moriarty, T. J.	.70	
N. B. Gas & Edison Light Co.,	5.40	
Sullivan, John B.	47.22	

Sullivan, Martin H.	$2.50	
Wing, C. F.	25.07	
Wood, Brightman & Co.,	18.95	$396.69

SCHOOL HOUSES:

Hart & Akin,	$122.21	
Highways and streets,	160.34	
Wood, Brightman & Co.,	56.16	338.71

WARD ROOMS:

Faunce & Johnson,	$3.93	
Gifford & Co., T. J.	23.43	
Moriarty, T. J.	.65	
N. B. Gas & Edison Light Co.,	11.48	
N. B. Water Works,	9.22	
Piper, A. D.	1.50	
Pope, A. P.	197.65	
Purrington, Brown & Richards,	1.50	
Wood, Brightman & Co.,	15.63	264.99

MISCELLANEOUS:

Anthony & Sons, E., incorp., advertising,	$34.45
Bates & Kirby, rent,	333.32
Beetle, R., & A. J. Sylvia, appraisal,	10.00
Brennan, George, flower beds,	94.15
Briggs & Lawrence, use of furniture and repairing,	81.73
Brown, Green & Adams, cabinet,	50.00
Davis, Z. B., case for city sealer,	62.47
Durfee, E. M., furnace hoe,	.75
Evening Journal Co., advertising,	36.44
Fox, George S., table,	4.00
Gage, J. N., making cushions,	24.00
Gifford & Co., T. J., tubing,	.45
Hart & Akin, lettering,	5.50
Hathaway, L. J., repairing wheelbarrow,	1.00
Hayes, N. P., wheelbarrow,	3.75
Highways and streets, shoveling snow,	116.45
Jenney & Son, P. P., repairing lawn mowers,	1.67
Mercury Pub. Co., advertising,	35.68
N. B. Gas & Edison Light Co., repairs,	1.49
Odd Fellows' Building Association, rent,	43.75
Pomeroy, H. G., repairing lawn mowers,	1.50
Purrington, Brown & Richards, water cooler, brooms, and dusters,	13.62

Reynolds, E. G., hack hire,	$6.00	
Slocum, F. R., furniture,	139.25	
Taylor & Son, H. J., cuspidors and dusters,	7.47	$1,108.89
		$7,519.62

Cr.

By appropriation,	$2,062.50	
Transfers from unappropriated funds,	4,981.57	
Transfer from incidentals,	79.73	
Transfers to balance,	395.82	$7,519.62

ACUSHNET AVENUE SCHOOL HOUSE ADDITION.

Dr.

Brownell, Alfred M.	$6,355.35	
Hunt, Samuel C.	594.65	$6,950.00
Jan. 1, 1894. To balance,		10,040.00
		$16,990.00

Cr.

By special appropriation,	$16,990.00

Cr.

Jan. 1, 1894. By balance,	$10,040.00

ACUSHNET AVENUE SCHOOL HOUSE—HEATING.

Cr.

By special appropriation,	$4,525.00

ENGINE HOUSE No. 4 — ADDITIONS, ALTERATIONS, AND IMPROVEMENTS.

DR.

Jenney & Buffington,	$652.52	
Moriarty, T. J.	210.18	
Penney, E. F.	122.15	
Sherman & Son, R. A.	998.91	$1,983.76

CR.

By special appropriation,	$1,250.00	
Transfers from unappropriated funds,	733.76	$1,983.76

ENGINE HOUSE LOT, CORNER ACUSHNET AVENUE AND DAVIS STREET.

DR.

Fay, James L., et als.,	$2,585.00

CR.

By transfer from incidentals,	$2,585.00

FIRE ESCAPES, ALMSHOUSE AND CITY HALL.

DR.

Black, P.	$3.51	
Durfee, E. M.	13.62	
Hammond & Son, C.	66.25	
Miller & Hook,	1,295.00	
Sherman & Son, R. A.	20.37	$1,398.75
To transfer to balance,		131.25
		$1,530.00

CR.

By special appropriation,	$1,530.00

SCHOOL HOUSE, CORNER FOURTH AND MADISON STREETS.

Dr.

Brightman, Charles O.	$14,166.40	
Smith, Nat. C.	796.25	$14,962.65
Jan. 1, 1894. To balance,		26,007.35
		$40,970.00

Cr.

By special appropriation,	$40,970.00

Cr.

Jan. 1, 1894. By balance,	$26,007.35

SCHOOL HOUSE, CORNER FOURTH AND MADISON STREETS—HEATING.

Cr.

By special appropriation,	$4,600.00

LIBRARY BUILDING—DRAINAGE AND PLUMBING.

Dr.

Mahoney, T. E.	$389.58	
N. B. Boiler & Machine Co.,	34.28	$423.86
To transfer to balance,		176.14
		$600.00

Cr.

By special appropriation,	$600.00

REPAIRS WARD ROOM, WARD 3, PRECINCT 5.

Dr.

Caswell, William H.	$107.38	
Hammond, Francis W.	281.56	
Harding, J. H.	3.20	
Hatch, George E.	6.72	
Holmes, D. W.	29.44	
N. B. Gas & Edison Light Co.,	8.27	$436.57
To transfer,		88.43
Jan. 1, 1894. To balance,		75.00
		$600.00

Cr.

By transfer from unappropriated funds,	$600.00

Cr.

Jan. 1, 1894. By balance,	$75.00

SALARIES.

DR.

Jethro C. Brock, Mayor,	$2,000.00	
James H. Hathaway, Collector and Treasurer,	2,600.00	
Daniel B. Leonard, City Clerk,	1,000.00	
George W. Parker, City Auditor,	1,250.00	
Thomas F. Desmond, City Solicitor,	285.71	
Walter Clifford, City Solicitor,	492.30	
Walter A. Jenney, Sealer Weights and Measures,	103.00	
James H. Pease, Sealer Weights and Measures,	262.00	
Charles D. Tuell, Assessor,	1,000.00	
William A. Russell, Assessor,	750.00	
John A. Ruggles, Assessor,	750.00	
William A. Mackie, Clerk Common Council,	250.00	
Augustus D. Piper, City Messenger,	800.00	
Isaac Barnes, Bell Ringer,	111.05	
James B. Russell, Bell Ringer,	7.85	
George W. Howland, Bell Ringer,	6.10	
Henry F. West, Harbor Master,	250.00	
Charles E. Woodworth, Superintendent City Clock,	75.00	
Daniel D. Briggs, Supervisor of Wires,	300.00	
Dr. Daniel C. Ashley, Inspector Meat, Milk, and Provisions,	832.90	
Frederick Macy, Inspector of Buildings,	124.95	
Edmund O'Keefe, Inspector of Buildings,	699.52	
William S. Cook, Assistant City Clerk,	93.24	$14,043.62
BOARD OF HEALTH:		
Dr. William N. Swift,	$500.00	
Nathaniel Hathaway,	500.00	
Thomas W. Cook,	500.00	1,500.00
BOARD OF REGISTRARS:		
Emanuel Sullavou,	$400.00	
Herbert A. Blackmer,	366.30	
Charles J. McGurk,	400.00	
Daniel B. Leonard,	300.00	
Willard N. Lane,	33.70	1,500.00
BOARD OF ALDERMEN:		
George F. Brightman,	$100.00	
Harry C. Jenney,	100.00	
Frank C. Barrows,	100.00	

John Duff,	$100.00	
Henry H. Crapo,	100.00	
Oliver W. Cobb,	100.00	$600.00
		$17,643.62

Cr.

By appropriation,	$13,769.25	
Transfer from unappropriated funds,	3,874.37	$17,643.62

SEWERS—GENERAL ACCOUNT.

Dr.

Pay-rolls,	$3,782.62
Acushnet Iron Co.,	30.09
Allen, Charles N.	.25
Allen, Edwin	2.50
Ames Plow Co.,	118.55
Babbitt, Wood & Co.,	52.90
Boston Woven Hose & Packing Co.,	165.00
Bowker & Tripp,	26.41
Brownell, Dr. William E.	27.00
Brownell, Ashley & Co.,	.50
Church, Charles H.	.85
Cook, Samuel H.	300.00
Corson, T. S.	54.00
Cornell, C. R.	1.50
Covil, O. E.	2.00
Crapo, Peter	15.00
Crosby Steam Gauge & Valve Co.,	37.50
Delano, F. E.	5.02
DeWolf & Vincent,	9.00
Edson Manufacturing Co.,	182.00
Eggars, George	193.92
Engineering department,	12.33
Fichtenmeyer & Flynn,	5.39
Francis, M.	4.60
Gage, J. N.	3.00
Garcia, John	4.50
Gardner & Southwick,	3.84
Gray, Charles A.	18.75
Hart & Akin,	.80
Hatch & Co.,	20.90
Hayes, Dr. S. W.	63.00
Highways and streets,	5,394.74
Hillman, Washburn & Co.,	18.41
Ingersol-Sargent Drill Co.,	2,126.10
Kennedy, M. A.	122.40
Lowe, S. C.	3.43
Luscomb Machine Co.,	2.10
McAuliffe, John J.	10.32
McCullough, John	190.90
N. B. Boiler & Machine Co.,	19.96
N. B. Cordage Co.,	79.05
N. B. Street Transportation Co.,	28.50

N. Y., N. H. & H. Railroad Co.,	$5.23	
Old Colony Railroad Co.,	1.81	
Paine & Bro., S. S.	1,863.79	
Payan, J. Z.	3.20	
Peck, Walter B.	83.69	
Penney, E. F.	1.60	
Perrin, Seamans & Co.,	6.00	
Potter, E. L.	.15	
Portland Stone Ware Co.,	1,198.92	
Russell, William A.	125.00	
Sampson, George H.	149.48	
Shea, Michael	4.75	
Sherman & Son, C. R.	24.40	
Sherman, William H.	3.50	
Shurtleff, I. H.	2.00	
Sisson, J. S.	2.40	
Slocum, F. R.	3.50	
Smith-Carleton Iron Co.,	521.84	
So. Mass. Telephone Co.,	2.66	
Spooner & Bro., George H.	138.00	
Spooner, J. W.	6.00	
Staples Bros.,	44.00	
Sylvia, Manuel L.	2.99	
Sylvia, Dr. M. V.	513.00	
Terry, E. & K. C.	12.42	
Unappropriated funds, engineering department,	25.02	
Union Boot & Shoe Co.,	21.00	
Washburn & Moen Manufacturing Co.,	10.22	
Winslow, J. F., agent,	2,664.79	
Wood, Brightman & Co.,	13.63	$20,594.62

CR.

By appropriation,	$4,125.00	
Special appropriation,	2,000.00	
Transfers from unappropriated funds,	5,237.56	
Cash receipts as per Treasurer's report,	6,758.42	
Transfer to balance,	2,473.64	$20,594.62

SEWERS—BOWDITCH STREET, No. 4.

DR.

Pay-rolls,	$1,402.93	
Eggars, George	45.96	
Engineering department,	11.58	
Highways and streets,	188.80	
Sewers, general,	147.50	$1,796.77
To transfer to balance,		1.85
		$1,798.62

CR.

By transfer from unappropriated funds,	$1,475.00	
Special appropriation,	323.62	$1,798.62

SEWERS—BULLARD STREET.

DR.

Pay-rolls,	$1,443.53	
Engineering department,	20.35	
Highways and streets,	206.28	
Sewers, general,	342.62	
Sewers, Nye street,	35.80	
Sylvia, Dr. M. V.	6.00	$2,054.58
To transfer to balance,		15.22
		$2,069.80

CR.

By transfer from unappropriated funds,	$1,501.00	
Special appropriation,	565.50	
Cash receipts as per Treasurer's report,	3.30	$2,069.80

SEWERS—COFFIN AVENUE.

DR.

Highways and streets,	$8.66	
Sewers, general,	4.70	$13.36
To transfer to unappropriated funds,		7,635.42
		$7,648.78

CR.

Jan. 2, 1893. By balance,	$7,648.78

SEWERS—COVE ROAD, No. 3.

DR.

Pay-rolls,	$107.50

CR.

By special appropriation,	$107.50

SEWERS—DAVIS STREET.

Dr.

Pay-rolls,	$6,117.05	
Eggars, George	310.88	
Greene & Wood,	54.51	
Highways and streets,	736.49	
N. B. Water Works,	2.75	
Nye & Hadley,	.38	
Otheman & Dunham,	75.00	
Paine & Bro., S. S.	52.64	
Paisler, C. S.	.25	
Pierce, E. H.	22.83	
Sewers, general,	1,048.54	
Sewer, Nye street,	.50	
Sherman, James L.	167.38	
Terry, E. & K. C.	129.96	$8,719.16

Cr.

By special appropriation,	$6,700.00	
Cash receipts, as per Treasurer's report,	14.20	
Transfer to balance,	2,004.96	$8,719.16

SEWERS—FIELD STREET.

Dr.

Pay-rolls,	$582.45	
Engineering department,	13.42	
Greene & Wood,	29.73	
Highways and streets,	60.59	
Penney, E. F.	2.74	
Sewers, general,	138.80	$827.73
To transfer to balance,		12.27
		$840.00

Cr.

By special appropriation,	$840.00

SEWERS—MARKET AND PLEASANT STREETS.

DR.

Pay-rolls,	$727.42	
Greene & Wood,	17.53	
Highways and streets,	175.10	
Paine & Bro., S. S.	4.34	
Sewer, William street,	205.43	
Wood, Brightman & Co.,	12.00	$1,141.82
Jan. 1, 1894. To balance,		1,358.18
		$2,500.00

CR.

By special appropriation,	$2,500.00

CR.

Jan. 1, 1894. By balance,	$1,358.18

SEWERS—MYRTLE STREET, No. 1.

DR.

Pay-rolls,	$292.66	
Engineering department,	11.39	
Highways and streets,	61.06	
Sewers, general,	94.16	$459.27
To transfer to balance,		290.73
		$750.00

CR.

Jan. 2, 1893. By balance,	$750.00

SEWERS—MYRTLE STREET, No. 2.

Dr.

Pay-rolls,	$55.80	
Highways and streets,	8.06	
N. B. Water Works,	7.81	
Sewers, general,	1.56	
West, William R.	2.25	$75.48
To transfer to balance,		320.91
		$396.39

Cr.

Jan. 2, 1893. By balance,		$396.39

SEWERS—NYE STREET.

Dr.

Pay-rolls,	$2,621.33	
Eggars, George	200.58	
Greene & Wood,	46.92	
Highways and streets,	421.59	
Knowles, A.	.50	
Otheman & Dunham,	7.14	
Paine & Bro., S. S.	54.25	
Pease, Frank R.	3.15	
Pierce, E. H.	.60	
Pierce Manufacturing Co.,	1.50	
Sewers, general,	349.53	
Spencer's Wood Yard,	3.00	
Terry, E. & K. C.	85.92	
Engineering department,	22.00	$3,818.01
To transfer to balance,		1.41
		$3,819.42

Cr.

By special appropriation,	$3,379.61	
Transfer from unappropriated funds,	400.00	
Cash receipts, as per Treasurer's report,	39.81	$3,819.42

SEWERS—POPE STREET, No. 3.

DR.

Pay-rolls,	$354.27	
Highways and streets,	33.94	
N. B. Street Transportation Co.,	30.75	
N. Y., N. H. & H. Railroad Co.,	87.90	
Paine & Bro., S. S.	17.36	
Portland Stone Ware Co.,	247.49	
Sewers, general,	442.40	$1,214.11
To transfer to balance,		1,785.89
		$3,000.00

CR.

By special appropriation,	$3,000.00

SEWERS—SOUTH FIRST STREET, No. 5.

DR.

Pay-rolls,	$139.46	
Highways and streets,	20.75	
Sewers, general,	82.11	$242.32
To transfer to balance,		7.68
		$250.00

CR.

By special appropriation,	$250.00

SEWERS—SOUTH SECOND STREET, No. 7.

Dr.

Pay-rolls,	$339.10	
Eggars, George	4.15	
Engineering department,	4.28	
Highways and streets,	14.76	
Sewers, general,	114.42	$476.71
To transfer to balance,		110.05
		$586.76

Cr.

By special appropriation,	$400.00	
Cash receipts, as per Treasurer's report,	186.76	$586.76

SEWERS—SOUTH SECOND STREET, No. 8.

Dr.

Engineering department,	$12.42	
Highways and streets,	27.81	
Sewers, general,	93.89	
Sewers, South Second street, No. 7,	186.76	$320.88

Cr.

By special appropriation,	$300.00	
Transfer from unappropriated funds,	20.88	$320.88

SEWERS—SOUTH WATER STREET, No. 10.

DR.

Pay-rolls,	$102.93	
Engineering department,	11.10	
Highways and streets,	21.60	
Sewers, general,	78.23	$213.86
To transfer to balance,		36.14
		$250.00

CR.

By special appropriation,	$250.00

SEWERS—UNION STREET.

DR.

Pay-rolls,	$4,730.33	
Ashley, Isaac L.	.50	
Baylies, William	.60	
Bowker & Tripp,	.10	
Carson Trench & Machine Co.,	291.45	
DeWolf & Vincent,	11.05	
Eggars, George	248.81	
Greene & Wood,	218.73	
Highways and streets,	1,320.39	
Lowe, S. C.	7.91	
Luscomb Machine Co.,	1.37	
McCullough, John	45.00	
Old Colony Railroad Co.,	28.80	
Paine & Bro., S. S.	5 25	
Paisler, Charles S.	3.30	
Pierce, E. H.	2.20	
Sewers, general,	451.46	
Smith-Carleton Iron Co.,	6.75	
Sylvia, Dr. M. V.	42.50	
Wood, Brightman & Co.,	45.40	$7,461.90
To transfer to balance,		141.50
		$7,603.40

CR.

By special appropriation,	$7,600.00	
Cash receipts, as per Treasurer's report,	3.40	$7,603.40

SEWERS—WAMSUTTA MILLS VILLAGE.

Dr.

Pay-rolls,	$320.00

Cr.

By special appropriation,	$320.00

SEWERS — WILLIAM STREET.

Dr.

Pay-rolls,	$4,700.08	
Baylies, William	6.00	
Carson Trench & Machine Co.,	390.00	
Corson, T. S.	36.46	
Eggars, George	221.99	
Greene & Wood,	177.97	
Hart & Akin,	11.49	
Highways and streets,	1,064.24	
Ingersoll-Sargent Drill Co.,	19.20	
Lawton, C. H. & H. A.	.30	
Luscomb Machine Co.,	1.90	
McCullough, John	23.80	
N. B. Boiler & Machine Co.,	1.25	
Paine & Bro., S. S.	54.34	
Paisler Charles S..	11.88	
Peterson, Dr. C. A. B.	42.00	
Pierce, Dr. A. M.	5.00	
Pierce, E. H.	3.90	
Sewer, general,	856.83	
Sewer, Davis street,	10.87	$7,639.50

Cr.

By special appropriation,	$6,000.00	
Cash receipts, as per Treasurer's report,	205.43	
Transfer to balance,	1,434.07	$7,639.50

SINKING FUNDS.

DR.

To Sinking Fund Commissioners,		$64,524.81

CR.

By appropriation,	$62,440.00	
Cash receipts, as per Treasurer's report,	2,084.81	$64,524.81

TEMPORARY LOAN.

DR.

To paid loans,	$695,000.00	
Jan. 1, 1894. Balance,	80,000.00	$775,000.00

CR.

Jan. 2, 1893. By balance,	$179,864.45	
Cash receipts, per Treasurer's report,	595,135.55	$775,000.00

CR.

Jan. 1, 1894. By balance,	$80,000.00

TRUST FUNDS.

Cr.

By Sylvia Ann Howland Free Public Library Fund:	
One-half of the bequest of Sylvia Ann Howland for the support of Liberal Education and Free Public Library,	$50,000.00
By Sylvia Ann Howland Educational Fund:	
One-half of the bequest of Sylvia Ann Howland for the support of Liberal Education and Free Public Library,	50,000.00
By George Howland, Jr., Fund:	
Donation to Free Public Library,	1,600.00
By Charles W. Morgan Fund:	
Bequest to Free Public Library,	1,000.00
By Oliver Crocker Fund:	
Bequest to Free Public Library,	1,000.00
By James B. Congdon Fund:	
Donation to Free Public Library,	500.00
By Jonathan Bourne Prize Fund:	
Donation to School Committee,	1,000.00
By George O. Crocker Fund:	
Bequest to Free Public Library,	10,000.00
By Elizabeth T. Wood:	
Bequest to Free Public Library,	2,000.00
	$117,100.00

UNAPPROPRIATED FUNDS.

Dr.

Commonwealth of Massachusetts,	$14,443.00
John Kearney,	64.61
To TRANSFERS TO:	
Appropriations, special, 1893,	54,279.67
" " 1892,	74,633.24
Board of Health, garbage,	3,725.00
" " incidentals,	1,711.65
" " salaries,	492.19
Cedar Grove street school house addition,	1,460.50
Cemeteries,	4,951.54
Cemeteries, Oak Grove tomb,	247.29
City stable, tool house and workshop,	92.78
Com. of Mass., Chap. 447,	438.89
Court judgments,	8,671.66
Engine house No. 5 alterations,	180.52
Fire Department:	
Engine, hose wagon repairs, etc.,	402.50
Fire alarm, labor, and supplies,	2,846.40
Harnesses and repairs,	70.00
Horsekeeping, feeding, and shoeing,	863.61
Pay-rolls and Protecting Society,	6,893.69
Printing and incidentals,	149.98
Repairs of buildings,	120.13
Rents,	17.50
Salaries,	393.75
Telephones,	72.62
Wood, coal, and lights,	670.39
Free Public Library, salaries,	1,022.25
Incidentals,	7,432.10
Incidentals, Fourth of July,	550.00
Kempton street school house and lot,	872.36
Lighting the streets, arc lights,	119.21
" " gas lights,	559.17
N. B. Water Works,	2,100.00
Police department,	5,566.01
Poor department:	
Burials,	177.00
Cities and towns,	175.00
Clothing and supplies,	70.00
Fuel,	525.00

Groceries,	$384.56	
Incidentals,	373.63	
Salaries,	956.37	
State hospitals,	1,400.00	
Furnishing and supplies,	437.50	
Grain and provisions,	700.00	
Incidentals and pay-rolls,	612.50	
Printing, binding and stationery,	1,218.37	
Public schools:		
Books, stationery and supplies,	770.00	
Furnishing Kempton st. school house,	1,300.00	
Fuel,	2,273.87	
Janitors, day and evening,	1,925.00	
Pay of teachers,	3,250.00	
Lighting,	652.49	
Office, coal and rent,	105.00	
Office salaries,	770.00	
Printing and incidentals,	1,680.55	
Repairs of buildings and furniture,	1,400.00	
Repairs of heating apparatus,	1,173.98	
Telephones,	22.40	
Repairs city property,	4,981.57	
Engine house No. 4 additions and alterations,	733.76	
Ward room, ward 3, precinct 5,	600.00	
Salaries,	3,874.37	
Sewers:		
General,	5,237.56	
Bowditch street, No. 4,	1,475.00	
Bullard street,	1,501.00	
Nye street,	400.00	
South Second street, No. 8,	20.88	$237,291.57

CR.

Jan. 2, 1893. By balance,	$71,440.06	
Cash receipts, as per Treasurer's report,	158,216.09	
Transfer from Coffin avenue sewer,	7,635.42	$237,291.57

BALANCE OF PUBLIC PROPERTY.

DR.

To bonds issued,	$270,000.00	
Jan. 1, 1894. Balance,	943,808.48	$1,213,808.48

CR.

Jan. 2, 1893. By balance,	$1,002,687.77	
Bonds paid,	33,000.00	
Public property,	103,442.00	
Sinking Fund Commissioners,	74,678.71	$1,213,808.48

CR.

Jan. 1, 1894. By balance,	$943,808.48

BALANCE OF PUBLIC PROPERTY.

(OTHER THAN WATER WORKS.)

DR.

Jan. 2, 1893. To balance,	$1,280,363.00	
Increase in valuation over 1892,	103,442.00	$1,383,805.00

CR.

Jan. 1, 1894. By balance,	$1,383,805.00

DR.

Jan. 1, 1894. To balance,	$1,383,805.00

SINKING FUND COMMISSIONERS.

DR.

Jan. 2, 1893.	To balance,	$208,324.77	
	To increase in hands of Commissioners over 1892,	74,678.71	$283,003.48

CR.

Jan. 1, 1894.	By balance,	$283,003.48

DR.

Jan. 1, 1894.	To balance,	$283,003.48

BONDS.

DR.

	To bonds paid,	$33,000.00	
Jan. 1, 1894.	To balance,	1,823,000.00	$1,856,000.00

CR.

Jan. 2, 1893.	By balance,	$1,586,000.00	
	Bonds issued,	270,000.00	$1,856,000.00

CR.

Jan. 1, 1894.	By balance,	$1,823,000.00

NEW BEDFORD WATER WORKS.

(AS PUBLIC PROPERTY.)

DR.

Jan. 1, 1894.	To valuation of works,	$1,200,000.00

BONDS OF THE CITY OF NEW BEDFORD.

TITLES, RATES, AMOUNTS DUE ANNUALLY, AND TOTALS.

Due.	Water 7s.	Water 6s.	Water 5s.	Water 4s.	Improvem't 6s.	Improvem't 4s.	Improvem't 3½s.	Sewer 4s.	Sewer 3½s.	Park Loan 4s.	Totals.
1894,		$20,000		$100,000	$10,000						$130,000
1895,		20,000			10,000		$80,000				110,000
1896,		20,000			10,000		25,000				55,000
1897,		20,000			10,000		35,000				65,000
1898,		20,000			10,000	$15,000					45,000
1899,		20,000			10,000	62,000					92,000
1900,	$10,000		$20,000		10,000	25,000					65,000
1901,	10,000		20,000		10,000	73,000					113,000
1902,	10,000		20,000		10,000	50,000					90,000
1903,	10,000		20,000		10,000	162,000					202,000
1904,	10,000		20,000		10,000						40,000
1905,	10,000	20,000			10,000						40,000
1906,	10,000	20,000			10,000				$60,000		100,000
1907,	10,000	20,000			10,000				15,000		55,000
1908,	10,000	20,000			10,000			$35,000			75,000
1909,	10,000	20,000			12,000			43,000			85,000
1910,					28,000			48,000			76,000
1911,								57,000			57,000
1912,								100,000			100,000
1913,								108,000			108,000
1918,				20,000							20,000
1942,										$100,000	100,000
											$1,823,000

INTEREST PAYABLE IN 1894 ON PRESENT DEBT.

On $100,000	Water Bonds, at	7 per cent.,	$7,000
220,000	" "	6 "	14,200
100,000	" "	5 "	5,000
120,000	" "	4 "	4,800
190,000	Improvements, at	6 per cent.,	11,400
387,000	"	4 "	15,480
140,000	"	3½ "	4,900
391,000	Sewer Bonds, at	4 "	15,640
75,000	"	3½ "	2,625
100,000	Park Loan, at	4 "	4,000
$1,823,000			$85,045

THE FOLLOWING TABLE SHOWS THE AMOUNT OF TAXES LEVIED IN THIS CITY SINCE 1873, AND THE RATE PER THOUSAND, FOR STATE, COUNTY, AND CITY PURPOSES; ALSO THE NUMBER OF POLLS.

Year.	Valuation of Real Estate.	Valuation of Personal Property.	State Tax.	County Tax.	City Tax.	Overlay.	No. of Polls.	Rate of Tax.
1874,	$11,665,400	$13,846,904.95	$32,280	$27,874.24	$354,000	$11,005.10	$5,930	$16.20
1875,	11,946,600	14,428,674.00	32,280	28,415.48	383,000	17,136.07	6,226	17.00
1876,	12,411,200	14,339,002.00	26,244	23,859.86	387,000	20,251.49	6,651	16.60
1877,	12,609,200	13,524,097.00	21,870	23,859.86	436,200	17,273.46	6,562	18.60
1878,	12,808,700	13,137,011.20	14,580	25,249.76	371,500	17,259.61	6,729	16.00
1879,	12,898,300	12,874,418.00	7,290	25,666.72	386,000	17,497.36	6,891	16.40
1880,	13,138,400	13,137,519.00	21,870	28,377.03	361,250	15,080.89	7,028	15.70
1881,	13,505,400	13,699,922.00	21,870	26,871.30	437,300	16,084.49	7,025	18.00
1882,	14,138,300	13,974,587.00	29,160	25,689.88	434,200	17,605.64	7,340	17.50
1883,	15,109,300	15,180,305.00	25,770	29,468.95	452,400	16,614.41	7,694	16.80
1884,	15,635,900	15,718,182.00	34,360	26,668.72	462,700	13,031.04	8,141	16.60
1885,	16,293,800	15,104,090.00	27,770	27,735.50	457,950	17,028.11	8,349	16.30
1886,	16,778,900	15,416,695.50	27,015	33,883.77	456,300	15,328.18	8,699	16.00
1887,	17,372,600	15,309,658.00	40,522½	38,485.28	489,700	18,075.50	9,056	17.40
1888,	18,023,700	15,430,647.00	40,522½	41,274.10	486,411	19,364.29	9,424	17.00
1889,	18,928,800	15,718,866.00	34,700	51,476.17	508,600	17,642.91	9,972	17.10
1890,	20,041,700	16,829,154.00	30,362½	50,632.50	519,300	22,120.12	10,710	16.30
1891,	20,959,300	14,979,600.00	26,025	47,819.40	550,200	26,134.37	11,160	16.30
1892,	22,094,300	15,511,800.00	31,377	51,410.26	606,700	27,976.39	11,861	17.30
1893,	25,344,300	16,426,900.00	44,825	57,699.11	673,689	28,077.05	12,988	17.50

Average tax rate for 20 years, $16.83.

City of New Bedford,
In Committee, March 15, 1894.

The sub-committee appointed to appraise the city property and prepare a schedule of the same, have attended to that duty, and submit the following report, viz.:

Poor Department:		
Almshouse and out-buildings,	$26,000	
Farm, containing 70 acres,	14,000	
Furniture in almshouse,	2,750	
Farming and mechanics' tools,	450	
Tedders, horse-rake, manure-spreader, etc.,	435	
Carts, gears, and lumber wagons, etc.,	1,300	
Ambulance,	250	
Horses, oxen, cows, hogs, and poultry,	1,675	
Hay, grain, vegetables, pork, etc.,	2,725	
Wood and coal shed, corner North Second and North streets,	3,000	
Wood and coal in shed,	1,293	$53,878
Board of Health:		
Small pox hospital,	$1,000	
Old almshouse and out-buildings,	1,500	
Furniture in hospital,	75	2,575
Highways and Streets Department:		
Sundries, as per Superintendent's Report,		24,644
Sewer Department:		
Sundries, as per Superintendent's Report,		13,298
Street Light Department:		
Gas and naphtha lamps, posts, and lanterns,	$3,950	
Two houses for oil,	300	
Tools for Inspector of Petroleum,	50	4,300
Public Buildings, Land, etc.		
City Hall and lot,	$70,000	
City Library building and lot,	75,000	
City Common,	50,000	
Rural cemetery,	20,000	
Oak Grove cemetery,	15,000	

Pine Grove cemetery,	$800	
Central police station and lot,	18,000	
Willis street police station and lot,	2,500	
West police station,	300	
Police station and lot corner South Water and Blackmer streets,	22,070	
Police station and lot corner Bowditch and Weld streets,	17,500	
Police signal barn and lot,	6,500	
Police telegraph signal system, including horses, harnesses, wagons, and apparatus,	17,600	
Volumes in City Library,	52,800	
Land on Clarks Point,	200	
South pound lot,	200	
Ward house and lot, Fifth ward,	1,400	
Ward house and lot, Sixth ward,	1,600	
Standard weights and measures,	300	
Surveying instruments,	800	
Two brass field pieces, muskets, etc.,	1,300	
New city stable lot and buildings,	46,000	
Brooklawn park,	30,000	
West end park,	34,000	
Grove school park,	10,500	
Building and lot corner of High and Foster streets,	2,000	$496,370

School Department:

Acushnet school house and lot,	$7,500	
Acushnet avenue "	31,950	
Cannonville "	1,500	
Cedar street "	6,500	
Cedar Grove street "	47,900	
Clarks Point "	800	
Dartmouth street "	16,690	
Fifth street "	50,000	
High school "	127,000	
Kempton street "	64,500	
Linden street "	2,500	
Madison street "	21,900	
Maxfield street "	20,000	
Merrimac street "	18,000	
Middle street "	30,000	
North (Tobey road) "	2,000	
Parker street "	50,000	
Plainville "	1,000	
Rockdale "	1,200	

William street school house and lot,	$5,000	
Thompson street "	36,000	
Harrington "	53,000	
Division street "	30,000	
Truant school house,	1,700	
Apparatus and furniture in school houses,	46,500	$673,140

FIRE DEPARTMENT:

Engine house and lot, Acushnet,	$1,200	
" Acushnet avenue and Davis street,	15,500	
Engine house and lot, Hillman street,	20,100	
" Purchase street, No. 1,	12,000	
" Purchase street, No. 2,	12,000	
" Fourth street,	13,000	
" Bedford street,	14,900	
" Durfee street,	15,000	
Steam fire engine No. 1,	3,000	
" No. 2,	3,000	
" No. 4,	3,000	
" No. 5,	1,000	
" No. 6,	3,000	
" No. 7,	3,000	
" No. 2 (old),	1,000	
Eight hose carriages,	3,200	
Hand engine, No. 9,	500	
Hayes truck, No. 1,	3,000	
Ryan truck, No. 2,	1,200	
Hayes truck, No. 3,	3,000	
12,000 feet of hose,	6,000	
Thirty horses and harnesses,	6,000	
Nine wagons,	2,700	
Fire alarm telegraph, including bells, strikers, etc.,	20,000	
Sundries,	2,500	168,800
		$1,437,005
NEW BEDFORD WATER WORKS,		1,200,000
		$2,637,005

RECAPITULATION.

Poor department,	$53,878	
Board of Health,	2,575	
Highways and streets department,	24,644	
Sewer department,	13,298	
Street lights department,	4,300	
Public buildings, land, etc.,	496,370	
School department,	673,140	
Fire department,	168,800	
New Bedford Water Works,	1,200,000	$2,637,005

Respectfully submitted,

ARTHUR L. BLACKMER,
ELLIS L. HOWLAND,
OLIVER PRESCOTT, Jr. } Committee.

AUDITOR'S TRIAL BALANCE, JANUARY 1, 1894.

	Dr.	
N. B. Water Works, as public property,	$1,200,000.00	
Public property other than Water Works,	1,383,805.00	
Sinking Fund Commissioners,	283,003.48	
Appropriations, general, 1893,	35,232.69	
" " 1892,	12,989.45	
" " 1891,	5,685.38	
" " 1890,	16,142.67	
" " 1889,	13,713.87	
" " 1888,	2,347.78	
" special, 1893,	178,099.91	
Com. of Massachusetts, Chap. 279,	1,290.47	
" " " 301,	8,332.30	
Real estate tax account,	682.94	
City Treasurer, balance of cash,	8,416.28	$3,149,742.22
	Cr.	
Trust funds,	$117,100.00	
Bonds,	1,823,000.00	
Balance of public property,	943,808.48	
Cemeteries, sale of lots,	555.00	
Cemetery funds,	24,094.93	
Engine house, Acushnet ave. and Davis st.,	8,598.20	
" " heating,	1,050.00	
Fire department, engine No. 5, new,	3,500.00	
Free Public Library, subject catalogues,	576.33	
" " trustees of	3,533.94	
Incidentals,	1,678.00	
Kempton street school house and lot,	690.68	
Layout and acceptance, Sears court,	1,000.00	
N. B. School Committee, Howland Fund,	1,707.25	
" " Jona. Bourne prize fund,	30.00	
N. B. Water Works	41,337.41	
Parks fund,	27,228.05	
Parks and squares,	1,879.81	
Platting system,	17,435.00	
Public schools, Kempton street cooking school,	38.90	
" manual training school,	988.43	
" dog fund,	3,306.28	
Acushnet avenue school house, addition,	10,040.00	
" " heating,	4,525.00	
School house, Fourth and Madison sts.,	26,007.35	
" " " heating,	4,600.00	
Repairs, ward room, Ward 3, Precinct 5,	75.00	
Sewers, Market and Pleasant streets,	1,358.18	
Temporary loan,	80,000.00	$3,149,742.22

We have examined the foregoing and find it correct.

ARTHUR E. PERRY,
JOHN H. BARROWS,
JOSEPH CHAUSSE,

Sub-committee of the Committee on Finance, appointed to examine the books and accounts of the Auditor and Treasurer.

Approved,

ISAAC L. ASHLEY,
ARTHUR E. PERRY,
JOSEPH A. WRIGHT,
C. J. LEARY,
CHAS. E. BROWNELL,
} Committee of Audit.

In Board of Aldermen,
September 27, 1894.

Received, ordered printed in the City Documents, and sent down for concurrence.

D. B. LEONARD,
City Clerk.

In Common Council,
9 mo., 27, 1894.

Concurred,

WM. A. MACKIE,
Clerk.

ANNUAL REPORT

OF THE

CITY TREASURER

For the Year Ending Dec. 31, 1893.

Statement of City Treasurer,

JANUARY 1, 1894.

City of New Bedford,
Treasurer's Office,
January 1, 1894.

To the City Council:

Gentlemen,—I herewith most respectfully present to you my account as Treasurer of the city for the financial year ending December 31, 1893.

JAMES H. HATHAWAY,
City Treasurer.

RECEIPTS.

Balance, January 2, 1893,	$16,481.73
APPROPRIATIONS, GENERAL, 1889.	
From Collector, taxes 1889 and previous,	84.26
APPROPRIATIONS, GENERAL, 1890.	
From Collector, taxes 1890,	50.15
APPROPRIATIONS, GENERAL, 1891.	
From Collector, taxes 1891,	4,077.8

APPROPRIATIONS, GENERAL, 1892.

From Collector, taxes 1892,		$8,258.86

APPROPRIATIONS, GENERAL, 1893.

From Collector, taxes 1893,	$628,456.31	
Part of corporation tax for discount of 5 per cent. on taxes, as per order of City Council,	10,000.00	638,456.31

APPROPRIATIONS, SPECIAL, 1892.

From sale of sewer bonds, 4s,	$108,000.00	
Sale of improvement bonds, 4s,	162,000.00	270,000.00

BLOCK PAVING ACUSHNET AVENUE

From highways and streets, cobble paving account,	888.75

CEMETERIES.

From care and sales of lots,	$6,923.90	
Amount returned, twice audited,	3.00	6,926.90

CEMETERY FUNDS.

From deposits for perpetual care,	2,450.00

CEMETERIES—SALES OF LOTS.

From sales,	555.00

COMMONWEALTH OF MASSACHUSETTS, CHAP. 301.

From State, amount paid to reimburse city to Jan. 2, 1893,	7,533.00

COMMONWEALTH OF MASSACHUSETTS, CHAP. 279.

From State, one-half amount paid by city for military aid, reimbursed to Jan. 2, 1893,	$1,785.50	
State, one-half amount paid by city for burial of soldiers, reimbursed to Jan. 2, 1893,	105.00	1,890.50

COURT JUDGMENTS.

From State Treasurer, State's portion of abatement National Bank of Commerce taxes, 1890, 1891, and 1892,	4,448.70

ENGINEERING DEPARTMENT.

From sundry persons and departments for grades, etc.,	140.12

FIRE DEPARTMENT.

From sundry persons for pumping and use of hose,	$72.48	
Sale of horse,	75.00	
Amounts returned, bills twice audited,	18.05	
Sale of dressing,	313.54	
Sale of coal,	12.13	
Sale of old material,	52.29	
Care of police signal service,	866.50	$1,409.99

FREE PUBLIC LIBRARY—DOG FUND.

From County Treasurer, one-half amount paid for dog licenses,	1,206.39

FREE PUBLIC LIBRARY—SALARIES.

From Free Public Library, dog fund,	250.00

FREE PUBLIC LIBRARY—TRUSTEES.

From permanent debt, interest on trust funds,	$3,726.00	
Amount returned, overpaid,	2.00	3,728.00

HIGHWAYS AND STREETS—MISCELLANEOUS.

From various departments of the city for labor and material furnished,	15,182.00

HIGHWAYS AND STREETS—PRIVATE WORK AND TRIMMING TREES.

From sundry persons for flagging, concrete, drains, dressing, carting, trimming trees, etc.,	27,379.04

INCIDENTALS.

From use of telephones,	$2.40	
Care of lots, cemeteries, 1893,	16.00	
Engineering department,	1,040.27	
Amounts returned, twice audited,	12.00	1,070.67

NEW BEDFORD SCHOOL COMMITTEE—JONATHAN BOURNE PRIZE FUND.

From permanent debt, interest on fund,	60.00

NEW BEDFORD SCHOOL COMMITTEE—DOG FUND.

From County Treasurer, one-half amount paid for dog licenses,	1,206.40

NEW BEDFORD SCHOOL COMMITTEE—HOWLAND FUND.

From permanent debt, interest on fund,		$3,000.00

NEW BEDFORD PUBLIC SCHOOLS—PRINTING AND INCIDENTALS.

From School Committee,		21.36

PARK FUND.

From sale of buildings head of Court street,		92.50

PARKS AND SQUARES.

From sale of grass, etc.,		267.89

PERMANENT DEBT.

From accrued interest on improvement bonds,	$745.77	
Water rates,	10,000.00	10,745.77

POLICE DEPARTMENT.

From fines, Third District Court,	$5,300.78	
Board of Health, salary of inspector,	971.00	
Error in audit,	3.10	
Rent of court room, July 1, 1892, to Oct. 1, 1893,	500.00	
Sale of dressing,	9.30	6,784.18

POOR DEPARTMENT—GROCERIES.

From cities and towns,	$2,790.32	
State, temporary support, transportation, and burials,	2,680.08	
Reimbursements from State aid,	949.94	
Sale of effects,	7.00	
Sale of farm products,	1,380.37	
Sundry persons, board at almshouse and insane hospitals,	1,164.44	8,972.15

PRINTING, BINDING, AND STATIONERY.

From Water Works,		34.23

REAL ESTATE TAX ACCOUNT.

From amount paid to redeem real estate of Mary F. Johnson, sold to city for tax of 1890,	$15.62	
Amount paid to redeem real estate of S. L. Bassett, sold to city for tax of 1888,	27.02	42.64

SEWERS—GENERAL ACCOUNT.

From sundry persons and city departments for material furnished and labor,		$6,758.42

SEWER—BOWDITCH STREET, No. 4.

From amount overpaid, returned,		3.30

SEWER—DAVIS STREET.

From sundry departments, material furnished,		14.20

SEWER—LOWERING UNION STREET.

From departments, material furnished,		3.40

SEWER—LOWERING WILLIAM STREET.

From departments, material furnished,		205.43

SEWER—NYE STREET.

From departments, material furnished,		39.81

SEWER—SOUTH SECOND STREET, No. 7.

From South Second street sewer, No. 8, labor,		186.76

SINKING FUNDS.

From premium on $108,000 sewer bonds, 4s,	$1,919.81	
Premium on $22,000 improvement bonds, 4s,	165.00	2,084.81

STREET LIGHTS.

From amount bill returned, twice audited,		.41

TEMPORARY LOAN.

From note N. B. Institution for Savings, Jan. 11, 1893,	$30,000.00	
Notes F. S. Moseley & Co., Boston, Jan. 31, 1893,	150,000.00	
Note N. B. Five Cents Savings Bank, Feb. 1, 1893,	30,000.00	
Incidental account, discount on note,	135.55	
Note F. S. Moseley & Co., March 6, 1893,	30,000.00	
Note Citizens National Bank, March 30, 1893,	10,000.00	
Note Mechanics National Bank, March 30, 1893,	10,000.00	

Note Merchants National Bank, March 30, 1893,	$10,000.00	
Note National Bank of Commerce, March 30, 1893,	10,000.00	
Note First National Bank, March 30, 1893,	10,000.00	
Note Sinking Fund Commission, April 1, 1893,	80,000.00	
Note estate C. A. Brown, July 22, 1893,	30,000.00	
Notes Rogers, Newman & Tolman, July 27, 1893,	10,000.00	
Note E. H. Rollins & Sons, July 28, 1893,	3,000.00	
Note Citizens National Bank, July 28, 1893,	20,000.00	
Note Merchants National Bank, July 28, 1893,	20,000.00	
Note Mechanics National Bank, July 28, 1893,	20,000.00	
Note National Bank of Commerce, July 28, 1893,	20,000.00	
Note First National Bank, July 28, 1893,	20,000.00	
Note Albert Cameron, Aug. 2, 1893,	2,000.00	
Notes Brewster, Cobb & Estabrook, Dec. 21, 1893,	80,000.00	$595,135.55

UNAPPROPRIATED FUNDS.

INTEREST.

From interest on deposit,		$658.55	
Interest and costs, taxes,		756.90	$1,415.45

LICENSES AND FEES.

From Board of Health, pig licenses,		$42.00	
Circus license, Barnum & Bailey,		60.00	
City Clerk, licenses and fees,		1,291.42	
Inspector, milk licenses,		139.00	1,532.42
Liquor licenses, including one-fourth due State:			
31 first and fourth class,	$46,500.00		
4 same, innholders,	6,000.00		
6 fourth class,	3,600.00		
9 club,	1,800.00		
37 sixth class, to May 1, 1893,	37.00		
41 sixth class, to May 1, 1894,	41.00		57,978.00
Opera House license,			20.00
Pedlers' licenses,			225.00
Sealer of Weights and Measures, fees,			56.86
			$59,812.28

RENTS.

From State, City Guards' armory,	$400.00		
State, Naval Reserve armory,	200.00		
City Hall,	1,104.85		
Veteran firemen,	225.00	$1,929.85	

SEWERS.

From entrance fees,	$1,190.00		
Sewer taxes,	17,083.09	18,273.09	

SUNDRY SOURCES.

From grades furnished,	$142.16		
Tuition, non-resident pupils,	992.22		
Amounts unclaimed, returned to treasury,	37.50		
Sale police station, Water street,	197.70		
Sale Arnold street school house and lot,	1,764.97		
Sale land to B. Rodman estate,	54.50		
Sale Fourth street school house,	125.70		
Sale sundry articles,	49.78		
Care cemetery lots under new ordinance,	1,837.53		
Premium on temporary loan,	1.00	5,203.06	

STATE.

From amount received to credit of bank tax 1892,	$54.82		
Amount received to credit corporation tax 1892,	4,769.41		
Amount received to credit corporation tax 1893,	61,356.95		
Amount received to credit of bank tax 1893,	3,351.38		
Tax on ships in foreign trade,	1,307.56		
Amount received to reimburse city for care State cases, contagious disease,	742.24	71,582.36	$158,216.09

WATER WORKS.

From Water Registrar, rebate on contract,	$123.48	
Water rates,	81,439.27	
Service pipes,	8,456.46	
Sale of meters,	486.75	
Main pipe,	15.97	

Fines for non-payment,	$60.00	
George S. Rice,	26.25	
Rent of house, Freetown,	25.00	
Labor on salt water conduit,	133.08	
Sale of boilers,	28.45	
Sale of hay,	86.10	$90,880.81
		$1,897,224.36

EXPENDITURES.

Paid on Mayor's warrant, Jan. 12, 1893, audit No. 1,	$13,538.26
Jan. 18, 1893, audit No. 2,	6,253.72
Jan. 25, 1893, audit No. 3,	6,298.96
Feb. 1, 1893, audit No. 4,	6,075.04
Feb. 8, 1893, audit No. 5,	180,008.98
Feb. 15, 1893, audit No. 6,	8,066.74
Feb. 23, 1893, audit No. 7,	6,095.64
Mar. 2, 1893, audit No. 8,	5,968.12
Mar. 1, 1893, audit No. 9,	28,928.25
Mar. 15, 1893, audit No. 10,	9,013.88
Mar. 23, 1893, audit No. 11,	7,108.32
Mar. 29, 1893, audit No. 12,	7,256.26
April 6, 1893, audit No. 13,	7,203.20
April 8, 1893, audit No. 14,	62,925.80
April 13, 1893, audit No. 15,	8,102.52
April 13, 1893, audit No. 16,	11,799.61
April 27, 1893, audit No. 17,	6,032.25
May 4, 1893, audit No. 18,	11,490.52
May 10, 1893, audit No. 19,	66,712.96
May 11, 1893, audit No. 20,	9,717.04
May 14, 1893, audit No. 21,	17,492.55
May 24, 1893, audit No. 22,	10,554.29
May 25, 1893, audit No. 23,	34,895.74
June 8, 1893, audit No. 24,	13,031.80
June 10, 1893, audit No. 25,	44,435.35
June 15, 1893, audit No. 26,	11,012.00
June 22, 1893, audit No. 27,	9,662.90
June 29, 1893, audit No. 28,	9,747.54
July 5, 1893, audit No. 29,	13,015.83
July 10, 1893, audit No. 30,	43,223.28
July 13, 1893, audit No. 31,	21,258.44
July 19, 1893, audit No. 32,	5,516.36
July 26, 1893, audit No. 33,	13,960.54
Aug. 2, 1893, audit No. 34,	7,618.27
Aug. 10, 1893, audit No. 35,	46,291.46

Aug. 16, 1893, audit No. 36,	$8,626.80
Aug. 23, 1893, audit No. 37,	6,364.55
Aug. 30, 1893, audit No. 38,	9,444.33
Sept. 6, 1893, audit No. 39,	6,265.36
Sept. 8, 1893, audit No. 40,	46,585.90
Sept. 13, 1893, audit No. 41,	8,201.97
Sept. 21, 1893, audit No. 42,	9,099.29
Sept. 29, 1893, audit No. 43,	6,050.65
Sept. 30, 1893, audit No. 44,	2,455.50
Oct. 5, 1893, audit No. 45,	11,690.34
Oct. 10, 1893, audit No. 46,	112,018.29
Oct. 12, 1893, audit No. 47,	8,987.80
Oct. 19, 1893, audit No. 48,	20,805.48
Oct. 26, 1893, audit No. 49,	64,307.94
Nov. 2, 1893, audit No. 50,	11,885.15
Nov. 9, 1893, audit No. 51,	540,430.20
Nov. 15, 1893, audit No. 52,	33,311.31
Nov. 22, 1893, audit No. 53,	15,083.49
Nov. 29, 1893, audit No. 54,	9,933.11
Dec. 6, 1893, audit No. 55,	10,953.55
Dec. 11, 1893, audit No. 56,	27,299.39
Dec. 13, 1893, audit No. 57,	19,833.30
Dec. 21, 1893, audit No. 58,	12,856.93
Dec. 27, 1893, audit No. 59,	9,628.36
Dec. 30, 1893, audit No. 60,	106,376.67
	$1,888,808.08
Balance in treasury, Jan. 1, 1894,	8,416.28
	$1,897,224.36

ANNUAL REPORT

OF THE

COLLECTOR OF TAXES

FOR THE

YEAR ENDING DECEMBER 31,

1893.

Statement of the Collector of Taxes, 1893.

City of New Bedford,
Collector's Office,
January 1, 1894.

To the City Council:

Gentlemen,—I herewith respectfully present to you my account as Collector of Taxes of the City of New Bedford, embracing a statement in full of the various transactions in this department for the financial year just closed.

COLLECTOR'S STATEMENT, FROM 1887 TO 1892, INCLUSIVE.

Financial Year.	Unpaid Jan. 2, 1893.	Paid and Remitted.	Unpaid Jan. 1, 1894.
1887,	$7,749.49	$5.74	$7,743.75
1888,	7,359.93	8.50	7,351.43
1889,	8,248.89	73.56	8,175.33
1890,	7,521.98	194.66	7,327.32
1891,	14,087.59	4,250.43	9,837.16
1892,	23,810.60	8,472.76	15,337.84
	$68,778.48	$13,005.65	$55,772.83

TAXES OF 1893.

CHARGES.

State tax,	$44,825.00	
County tax,	57,699.11	
City tax,	673,689.00	
Overlay,	28,077.05	$804,290.16

PAYMENTS.

Paid State Treasurer, State tax,	$44,825.00	
Paid County Treasurer, County tax,	57,699.11	
Paid City Treasurer, City tax,	628,456.31	
Discount,	38,503.50	
Abatements by Assessors,	1,376.76	
Balance uncollected,	33,429.48	$804,290.16

About $95\frac{45}{100}$ per cent. of the taxes of 1893 have been collected to this date. Of the taxes of 1892 and previous years, the collections amounted to $13,005.65, as shown above.

The State and County taxes for 1893 amounted to $102,524.11, more than one-eighth of the whole levy, adding $2.38 per thousand to our rate.

The receipts from the State Treasurer for corporation and other taxes for 1893 were as follows:

Corporation tax,	$71,356.95	
National Bank tax,	3,351.38	
Tax on ships in foreign trade,	1,307.56	$76,015.89

At least $13,000 of the corporation taxes due from the State still remain unpaid.

By an order of the City Council, passed early in the year, $10,000 of the sum received for corporation taxes were applied to the discount on taxes paid previous to October 16. The balance was placed to the credit of unappropriated funds, as shown in the Treasurer's statement which follows.

Respectfully submitted,

JAMES H. HATHAWAY,

Collector of Taxes.

In Board of Aldermen,
January 25, 1894.

Received, ordered printed in the City Documents, and sent down for concurrence.

WILLIAM S. COOK,
Assistant City Clerk.

In Common Council,
January 25, 1894.

Concurred.

WILLIAM A. MACKIE,
Clerk.

ANNUAL REPORT

OF THE

Sinking Fund Commissioners

OF THE

CITY OF NEW BEDFORD,

For the Year 1893.

Report of the Treasurer of the Sinking Funds.

City of New Bedford,
Treasurer's Office,
January 1, 1894.

To the Commissioners of the Sinking Funds of the City of New Bedford:

Gentlemen,—Herewith I most respectfully present the statement of my account as Treasurer of the Sinking Funds for the year ending at this date.

The appropriations by the City Council in 1893 for the Sinking Funds were $62,200, the amount received from the Water Registrar, to be applied to the $20,000 of Water Bonds due April 1, 1918, was $600. By an order of the City Council, passed January last, the premium ($2,084.81) on City of New Bedford Sewer and Improvement Bonds sold during 1893, was paid to the fund.

At the present date the funds are nearly all invested in permanent securities that will net fully 4 per cent. per annum on the actual value of the Sinking Funds, including the premium of $9,421.25 paid on the securities purchased the present year; a large rate, as other cities in the Commonwealth figure upon 3 1-2 per cent. only.

Respectfully submitted,
JAMES H. HATHAWAY,
Treasurer.

APPROPRIATIONS BY THE CITY COUNCIL AND WATER BOARD, 1893.

Amount of sinking funds, Jan. 2, 1893,			$208,324.77
For $80,000 improvement bonds, April 1, 1885, 10 years,		$6,500.00	
$25,000 improvement bonds, April 1, 1886, 10 years,		2,300.00	
$30,000 sewer bonds, April 1, 1886, 20 years,		1,200.00	
$30,000 sewer bonds, Oct. 1, 1886, 20 years,		1,200.00	
$15,000 sewer bonds, April 1, 1887, 20 years,		600.00	
$35,000 improvement bonds, April 1, 1887, 10 years,		2,800.00	
$15,000 improvement bonds, April 1, 1888, 10 years,		1,200.00	
$35,000 sewer bonds, April 1, 1888, 20 years,		1,400.00	
$43,000 sewer bonds, April 1, 1889, 20 years,		1,720.00	
$62,000 improvement bonds, April 1, 1889, 10 years,		4,960.00	
$48,000 sewer bonds, April 1, 1890, 20 years,		1,920.00	
$25,000 improvement bonds, April 1, 1890, 10 years,		2,000.00	
$57,000 sewer bonds, April 1, 1891, 20 years,		2,280.00	
$73,000 improvement bonds, April 1, 1891, 10 years,		5,840.00	
$100,000 sewer bonds, April 1, 1892, 20 years,		4,000.00	
$50,000 improvement bonds, April 1, 1892, 10 years,		4,000.00	
$100,000 park loan bonds, June 1, 1892, 50 years,		1,000.00	
$108,000 sewer bonds, April 1, 1893, 20 years,		4,320.00	
$162,000 improvement bonds, April 1, 1893, 10 years,		12,960.00	
$20,000 water bonds, April 1, 1888, 30 years, from water rates,		600.00	
		$62,800.00	
Received for interest on investments,	$7,793.90		
Received premium on sale of city bonds, per order of City Council,	2,084.81	9,878.71	72,678.71
Receipts, including balance, to Jan. 1, 1894,			$281,003.48
Less premium paid on bonds purchased,			8,846.25
Sinking fund investments, less premiums paid,			$272,157.23

INVESTMENTS FOR THE YEAR.

Boston & Lowell Railroad bonds, 4s:		
Due Aug. 1, 1913, at par,		$50,000.00
Old Colony Railroad bonds, 4s:		
Due Jan. 1, 1938,	$25,000.00	
Premium at $103,	750.00	25,750.00
Old Colony Railroad bonds, 4s:		
Due Jan. 1, 1938,	$50,000.00	
Premium at $101.50,	750.00	50,750.00
City of Cleveland water bonds, 4s:		
Due April 1, 1903,	$25,000.00	
Premium at $102.70,	675.00	25,675.00
Town of Attleborough bonds, 4s:		
Due April 1, 1895, at $99.25,		15,880 00
City of Milwaukee bonds, 5s:		
Due July 1, 1906,	$20,000.00	
Premium at $108.62½,	1,725.00	21,725.00
City of Grand Rapids bonds, 4½s:		
Due Oct. 1, 1913,	$35,000.00	
Premium at $103.50,	1,225.00	36,225.00
City of Saginaw bonds, 5½s:		
Due Nov. 1, 1913,	$15,000.00	
Premium at $118.50,	2,775.00	17,775.00
City of Springfield, O., bonds, 5s:		
Due Sept. 1, 1901, at $105⅝,	$4,000.00	
Due Sept. 1, 1902, at $106¼,	3,000.00	
Premium,	412.50	7,412.50
City of Fall River bonds, 4s:		
Due June 1, 1923,	$10,000.00	
Premium, at $102.50,	250.00	10,250.00
City of Newport bonds, 4s:		
Due May 15, 1923,	$15,000.00	
Premium,	403.75	15,403.75
New Bedford Five Cents Savings Bank, deposit,		1,000.00
Suffolk Savings Bank for Seamen, and others, Boston, deposit,		1,000.00
The Boston Five Cents Savings Bank, Boston, deposit,		500.00
Deposit in National Bank of Commerce, city,		1,657.23
Actual value of sinking funds, including premiums,		$281,003.48

AMOUNT OF SINKING FUND AND LOAN SECURED BY SAME IN EACH CLASS.

Class.	Sinking Fund.	Loan.	Due.
1	$69,132.44	$80,000	April 1, 1895.
2	21,319.41	25,000	April 1, 1896.
3	11,122.49	30,000	April 1, 1906.
4	9,529.34	30,000	Oct. 1, 1906.
5	4,775.27	15,000	April 1, 1907.
6	22,234.71	35,000	April 1, 1897.
7	7,985.14	15,000	April 1, 1898.
8	9,316.00	35,000	April 1, 1908.
9	3,988.70	20,000	April 1, 1918.
10	9,319.22	43,000	April 1, 1909.
11	26,890.36	62,000	April 1, 1899.
12	8,145.81	48,000	April 1, 1910.
13	8,485.34	25,000	April 1, 1900.
14	7,095.46	57,000	April 1, 1911.
15	18,174.37	73,000	April 1, 1901.
16	8,146.78	100,000	April 1, 1912.
17	8,146.78	50,000	April 1, 1902.
18	1,003.81	100,000	April 1, 1942.
19	4,336.45	108,000	April 1, 1913.
20	13,009.35	162,000	April 1, 1903.

Report of the Commissioners of Sinking Funds.

New Bedford, Mass., March 7, 1894.

At a meeting of the Commissioners of Sinking Funds, held this day, it was

Voted, To adopt the foregoing statement of the Treasurer as the report of the Commissioners of Sinking Funds of the City of New Bedford, required by the statutes of Massachusetts to be made annually to the City Council.

MORGAN ROTCH,
ANDREW R. PALMER,
WILLIAM H. PITMAN,
} Commissioners.

In Board of Aldermen,
March 22, 1894.

Received, ordered printed in the City Documents, and sent down for concurrence.

D. B. LEONARD,
City Clerk.

In Common Council,
3 mo. 22, 1894.

Concurred.

WILLIAM A. MACKIE,
Clerk.

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1893—CITY DOCUMENT NO. 9.

ANNUAL REPORT

OF THE

CHIEF OF POLICE

OF THE

City of New Bedford,

TO THE

CITY COUNCIL,

FOR THE

Year ending December 31, 1893.

NEW BEDFORD:
EVENING JOURNAL COMPANY, PRINTERS TO THE CITY.
1894.

REPORT.

CITY OF NEW BEDFORD,
OFFICE OF CHIEF OF POLICE,
December 31, 1893.

To the Honorable the Mayor and Gentlemen of the City Council:

I herewith submit the doings of the Police Department for the year ending December 31, 1893.

WHOLE NUMBER OF ARRESTS, 1969.

Males,	1,743	Americans,	873
Females,	226	Foreigners,	1,096
Total,	1,969		1,969

January,	70	August,	232
February,	96	September,	220
March,	119	October,	206
April,	127	November,	145
May,	195	December,	160
June,	211		
July,	188		1,969

CLASSIFICATION OF CRIME.

Assault and battery,	168	Breaking, entering and larceny,	23
Assault, felonious,	2	Bribing voters,	6
Assault with weapon,	3	Breaking and entering with intent to commit larceny,	1
Assault on an officer,	1	Burying human body without permit,	1
Adultery,	8	Cruelty to dumb animals,	9
Abduction,	1	Contempt of court,	6
Admitting minor to billiard saloon,	1	Crime against nature,	3
Bastardy,	6	Larceny,	98
Concealing mortgaged property,	1	Malicious mischief,	6
Disturbing the peace,	179	Murder,	2
Drunkenness,	1,168	Mutilating tomb stones,	4
Disturbing religious assembly,	2	Neglected children,	3
Embezzlement,	5	Non-support,	26
Escaped lunatics,	2	Obstructing an officer,	3
Exposing the person,	4	Obtaining goods under false pretences,	8
Fornication,	7	Obstructing street,	1
Gambling,	12	Overdriving a horse,	4
Idle and disorderly,	15	Peddling without a license,	7
Insane,	35	Perjury,	1
Illegal sale of liquor,	2	Receiving stolen goods,	4
Illegally transporting liquor,	2	Stealing a ride,	2
Impersonating an officer,	1	Stubborn children,	5
Keeping liquor nuisance,	23	Shooting a dog,	1
Keeping liquor with intent to sell,	31	Selling adulterated milk,	1
Keeping common nuisance,	11	Seduction,	1
Keeping shop open on the Lord's day.		Tramps,	3
Keeping noisy and disorderly house,	9	Threatening bodily harm,	1
Keeping unlicensed dog,	5	Violation city ordinances,	5
Keeping common gaming house,	1	Vagrants,	12
Larceny, felonious,	9	Violation pardon from Lyman school,	1
Arrests on warrrants,	433	Violation Lord's day,	5
Minors,	196	Violation school law,	2
Juveniles, included in minors,	57	Commitments,	852
		Non-residents,	303

NATIVITY OF PRISONERS.

United States,	873	Scotland,	43
British Provinces,	16	Spain.	
Canada,	184	Norway,	8
Ireland,	373	Switzerland.	
England,	321	Poland,	8
France.		Denmark,	1
Germany,	31	Austria,	3
Italy,	1	Arabia,	2
Portugal,	82	West Indies,	5
Sweden,	6	Russia,	7
Finland,	1	Bohemia,	3
Belgium,	1		
			1,969

PRIMARY DISPOSITION OF CASES.

Appealed from sentence,	146	Released by keeper of lockup,	2
Paid fines and costs,	510	Released by order of the court,	17
Committed to penal institutions,	852	Found not guilty and discharged,	39
Committed to insane asylums,	34	Nolle prossed,	13
Bound over and delivered to Superior Court,	37	Placed under bonds to keep the peace,	3
Quashed,	1	Continued on personal recognizance,	74
Defaulted,	7	Now pending,	31
Surrendered to out of town officers,	16		
Continued on probation,	187		1,969

MISCELLANEOUS BUSINESS.

Amount of property reported stolen in the city,	$5,048.60	Intoxicated persons helped home.	
Amount of property reported recovered,	3,275.82	Lost children found and restored,	143
Accidents reported,	1	Street obstructions reported,	9
Buildings found open and secured,	101	Sick and injured persons helped home,	36
Cases investigated,	2,202	Sick and injured persons helped to hospital,	35
Cases investigated by chief,	1,042	Sick and injured persons helped to alms house,	1
Defective sts. and sidewalks,	176	Water running to waste,	136
Dead bodies reported found,	2	Defective drains and vaults,	1
Dangerous dogs reported,	18	Disturbances suppressed,	141
Dog notices served,	317	Lights reported out:	
Dogs killed,	17	Electric, 1,353	
Fire alarms given,	6	Gas, 69	
Fires extinguished without alarms,	7	Naphtha, 2	
Horses found cast,	21		1,424
Horses killed,	3	Liquor search warrants served,	90
Stray teams put up,	29		

LODGERS.

Males	1,080	Americans,	547
Females,	10	Foreigners,	543
	1,090		1,090

NATIVITY OF LODGERS.

United Slates,	547	Ireland,	197
British Provinces,	13	Scotland,	30
England,	246	Sweden,	7
Canada,	26	Arabia,	1
Wales,	4	Germany,	9
Portugal,	4	Denmark,	3
Poland,	2		
Norway,	1	Foreigners,	543
Non-residents,	1,089	Minors,	42

POLICE DEPARTMENT.

The department, as at present constituted, consists of one chief, two captains, seven lieutenants, two inspectors, fifty-six patrolmen, two wagonmen, two drivers, nine housekeepers, one clerk, one matron, one janitor,—a total of eighty-four.

PROMOTIONS.

Lieutenant Timothy C. Allen, promoted to captain January 26, vice Luther M. Dayton, resigned.

Patrolman Arthur H. Jones, promoted to lieutenant February 16, vice Lieutenant Timothy C. Allen, promoted.

Patrolman Thomas Fay, promoted to lieutenant February 16, vice Lieutenant Hussey, resigned.

Franklin L. Hathaway and John C. Parker were permanently appointed inspectors February 23, under the civil service rules.

APPOINTMENTS.

Frank E. Demers on June 22, Albert J. Rose, Patrick Mc Donald and James M. Cox on September 11, were appointed police officers, having served a probationary period of six months under the civil service rules.

The following have been appointed police officers for a probationary period of six months, under the civil service rules, viz.:

July 13,	Ulysses L. Clark.
"	Andrew J. Smith.
"	John F. Oliver.
"	Eugene R. Russell.
July 21,	Edward Allen.
"	Edmund Foley.
"	Willis C. Underwood.

July 27, Albert N. Gray.
" Daniel Deneen.
Aug. 10, Frank Enos.
Aug. 24, George W. Pinkham.

August 27, Robert B. McEnnis was appointed driver, vice John D. Sullivan, probationary period expired.

Roster of the Police Department, 1893.

Rank.	Names.	Age.	Weight.	Height. feet.	inches.
Chief,	Douglass, George,				
Captain,	Wilber, James L.,	59	200	5	10
"	Allen, Timothy C.,	41	180	5	11
Lieutenant,	Adams, Lemuel D.,	57	170	5	7
"	Bryant, Seth E.,	54	158	5	9
"	Comstock, Thomas W.,	49	170	5	10
"	Peirce, Ellery,	63	172	5	6
"	Taft, Thomas J.,	42	160	5	9
"	Jones, Arthur A.,	39	174	6	2
"	Fay, Thomas,	35	155	5	8
Inspector,	Hathaway, Franklin C.,	41	225	5	11
"	Parker, John C.,	34	195	5	7
Patrolman,	Almond, Walter,	31	180	5	10
"	Arnett, Henry,	47	191	5	6
"	Allen, Edgar W.,	39	185	5	10
"	Arnett, James W.,	54	170	5	6
"	Allen, Edward,	30	185	5	9
"	Brownell, Milton A.,	38	195	5	10
"	Callanan, Thomas W.,	39	193	6	1
"	Cannavan, Patrick,	56	178	5	6
"	Clark, Ulysses L.,	35	175	6	3
"	Cox, James M.,	28	162	5	10
"	Dodds, James,	40	225	6	1
"	Dahoney, Thomas,	35	200	5	9
"	Deneen, Daniel,	31	189	5	9
"	Demers, Frank E.,	33	185	5	8
"	Dumec, Peter,	56	180	5	10
"	Enos, Frank,	26	170	5	9
"	Eldridge, Washington A.,	50	200	6	0
"	Foley, Edmund,	25	195	5	11
"	Gendron, George E.,	39	260	5	9
"	Gray, Albert N.,	27	187	5	8
"	Gifford, Charles E.,	48	200	5	11
"	Hussey, Frederick,	65	135	5	6
"	Humphrey, Daniel J.,	52	215	5	9
"	Ivey, James A.,	37	180	5	10
"	Kennedy, Patrick,	58	180	5	8
"	Moynan, Robert,	46	193	6	3/4
"	McBay, Charles L.,	34	170	5	11
"	Mitchell, James,	47	202	5	9
"	Murphy, Cornelius J.,	48	160	5	7
"	Mather, Joseph,	57	216	5	9
"	McCarthy, Jeremiah,	34	220	5	11
"	McDonald, Patrick,	23	170	6	1
"	Lee, Allen L.,	60	172	5	8
"	Oliver, John F.,	29	200	5	10
"	Paige, George W.,	47	228	5	10
"	Pinkham, George W.,	37	162	5	10

ROSTER OF THE POLICE DEPARTMENT.—*Continued.*

RANK.	NAMES.	Age.	Weight.	Height. feet.	inches.
Patrolman,	Roscoe, William E.,	30	198	5	10
"	Rooks, John C.,	36	260	6	0
"	Rose, Albert J.,	35	165	5	9
"	Rhodes, Henry W.,	41	155	5	9
"	Raymond, Hiram E.,	39	193	5	8
"	Russell, Eugene F.,	43	250	5	11
"	Sisson, Joseph DeL.,	69	218	5	8
"	Smith, Andrew J.,	50	170	5	11
"	Sweeney, Daniel P.,	31	238	5	11
"	Sullivan, Timothy,	45	175	5	8
"	Telford, John,	39	199	6	2
"	Taber, Jeremiah M.,	35	179	5	11
"	Taber, Charles H.,	47	176	5	9
"	Underwood, Willis C.,	35	190	5	10
"	Vogel, George,	55	162	5	5
"	Williams, John A.,	47	177	5	8
"	Weston, Stephen J.,	43	208	5	10
"	Wixon, James A.,	52	156	5	7
"	Wing, Joseph B.,	47	173	6	0
"	Wilson, Thomas H.	57	182	5	7
Wagonman,	Brady, John W.,	48	255	5	9
"	Jones, John M.,	50	188	5	8
Driver,	Jennings, Edward F.,	54	157	5	7
"	McEnnis, Robert B.,	37	150	5	9
Housekeeper,	Dayton, Luther M.,	68	160	5	8
"	Jones, Isaac M.,	63	173	5	10
"	Stevens, Henry,	58	182	5	8
"	Bumpus, Henry W.,	67	200	5	6
"	Kirby, David G.,	62	185	5	7
"	Russell, Elisha E.,	63	197	5	7
"	Mitchell, William H.,	66	167	5	9
"	Manchester, John B.,	56	250	5	8
"	Robbins, Charles H.,	71	188	5	8
Board of Health Officer,	Macomber, W. E.,				
Clerk,	West, Harry N.,				
Matron,	Bullard, Margaret S.,	66	174	5	2
Janitor,	Drew, Moses C.,				

In Memoriam.

PATROLMAN, JOHN SAVAGE,

Died May 24, 1893,

after a lingering sickness. He served the City twenty years as a faithful and efficient officer.

STATION HOUSES.

The department now occupies five station houses, an increase of one over last year, and are designated as follows, viz.:—(Central station) Station 1; (south station) Station 2; (west station) Station 3; (Willis street) Station 4; (Weld street) Station 5.

Station 2 is a new building and was occupied for the first time May 2. Station 4, which had not been in use for a year past, was again occupied February 1.

Station 3 is a small dilapidated building, entirely unsuited for the purpose, a view of which would be more convincing than any words from me. Its location is inconvenient and I would recommend that a new station house be built the coming year, located at or near the corner of Kempton and Cedar streets. It might be built in connection with a ward room which I understand is needed in that section.

PATROL STATION.

The apparatus consists of one patrol wagon, one ambulance, one van, and two horses.

The patrol wagon is heavy and cumbersome, and a lighter one would be better adapted to the requirements of the departments.

It is absolutely necessary that two sleeping rooms be finished in the second story of the building for the accommodation of the night wagonman and driver, the one now in use being nothing more than a large box.

SIGNAL SYSTEM.

In order to improve the telephonic part of the system, and do away with the buzzing sound, fourteen miles of covered wire have been run, and when the office connections have been made it will give a complete "three wire" system, which, it is hoped, will obviate this nuisance.

In order to have all the calls registered a duplicate register should be purchased to take the place of the one now in use, when it is being cleaned or repaired, which, owing to its delicate mechanism, has to be done quite often.

Understanding that the patent on telephones and transmitters has expired, and that the same can be purchased for fifteen dollars each, (the price now paid yearly for their use) as the city owns their boxes, I would suggest that immediate action be taken to investigate this matter, before any contract is made with the telephone company for the ensuing year. A number of new boxes should also be added.

Duty calls registered and recorded for the year ending December 31,	223,416
Telephone calls during same time,	14,219
Wagon calls " " "	1,163
	238,798

General Police Call.—A call box has been placed at police headquarters, attached to the fire alarm for use in cases of emergency to call out the entire force. The signal is 2–2–2 struck four times, and repeated if necessary. It was struck for the first time October 19, on the day of the first inspection and parade.

RECOMMENDATIONS.

In addition to the recommendations already offered I would suggest that a rule be made establishing the pay of members of the department when absent from duty on account of sickness, and the length of time they be allowed pay.

I would also recommend that the chief, captains and lieutenants wear shoulder straps and the patrolmen service stripes.

This year the department held its first inspection and parade, and from the success which attended it I would recommend it take place annually, and that a suitable place be provided by the city for drilling purposes.

I would call attention to the fact that no provision is made by the city for members of the department who have grown old in the service. Although they are hardly fitted for active work, it does not seem just to discharge them after they have been faithful and efficient officers for a long term of years.

For the good of the department, however, it seems to me important that a rule be adopted with limitations in regard to age for the discharge as well as for the appointment of members of the force, said rule not to apply to present members. Fitness alone should be the standard for appointment, and no other reason should have any weight.

Fire.—In case of fire in the central or business portion of our city, the patrol wagon at once answers the alarm by proceeding directly to the fire with a supply of ropes, that the streets may be immediately roped off, thus preventing the crowd from interfering with the firemen. This insures concerted action on the part of the officers and firemen, and prevents delay, which has been a great inconvenience in the past.

Although there is room for improvement, the force as a whole is in excellent condition and in thorough working order, and its efficiency at this time cannot be questioned.

The increase in the number of arrests is not of itself conclusive proof of an increase in crime. While indicative of this result, the additions to the force, the increase in population, an impartial enforcement of the law would contribute very materially to this result.

At the unanimous call of the Mayor and Aldermen, I took charge of this department, having good reason to believe the tenure of office was permanent. Although a life-long resident of another city, I immediately moved my family and transferred my interests here, at once becoming a resident and citizen. I have endeavored to fulfill the duties of the office in an impartial and business-like manner, devoting my entire time to the work. I have personally investigated over one thousand cases.

In the enforcement of the law I have received little if any outside help. I have employed no detectives, relying wholly upon the force, believing it to be their work; how well it has been done the records show. Although it has been customary to employ special officers just prior to election, I have endeavored to eliminate from the department anything that could be construed as pertaining to politics, and the pay-roll for specials for the month of November was $90.60, against $432.90 the previous year.

The total amount received from the Third Bristol Court for fines, which is paid to the City Treasurer and credited to the department, including the amount received from the House of Correction, was $6,735.03, against $2,355.71 last year,— $1,502.00 of the former amount was received for drunks, the new drunk law going into effect July 1st. The difference in these amounts together with the difference in the amount paid for special officers ($2,500), would make about $7,000. Deducting this from the increase in the running expenses of the department, (about $12,000) would leave the net increase about $5,000. Considering the force has been added to by the appointment of eleven patrolmen, two housekeepers, and that another station has been opened this year, it seems to be the money has been well spent. The amounts are not exact but approximate.

In conclusion I would thank his Honor, the Mayor, and the Committee on Police, District Attorney Knowlton, Judge Borden, City Solicitor Clifford, Clerk of the Court Cobb, and all others who have in any way assisted me in the discharge of my duties. I would also thank the members of the department for the prompt and efficient manner in which they have discharged their several duties.

Respectfully submitted,

GEORGE DOUGLASS,

Chief of Police.

In Board of Aldermen,
January 4, 1894.

Received, and ordered printed in the City Documents, and sent down for concurrence.

D. B. LEONARD,
City Clerk.

In Common Council,
1 mo. 4, 1894.

Concurred.

WILLIAM A. MACKIE,
Clerk.

1894—CITY DOCUMENT NO. 10.

FIFTH ANNUAL REPORT

OF THE

BOARD OF PUBLIC WORKS

OF THE

CITY OF NEW BEDFORD

TO THE

CITY COUNCIL,

TOGETHER WITH THE

SUPERINTENDENT'S REPORT

TO THE BOARD,

FOR THE YEAR 1893.

NEW BEDFORD:
EVENING JOURNAL COMPANY, PRINTERS TO THE CITY,
1894.

BOARD OF PUBLIC WORKS.

Organized May 3, 1889, under Chapter 167 of the Acts and Resolves of 1889.

ORGANIZATION FOR 1893.

JETHRO C. BROCK, Mayor, Chairman.

SAMUEL C. HART, President of the Common Council.

MORGAN ROTCH, appointed April 11, 1889, reappointed April 14, 1892; term expires May, 1895.

THOMAS B. TRIPP, appointed October 9, 1890, reappointed April 13, 1893; resigned April 17, 1893.

GEORGE F. BARTLETT, appointed July 13, 1891; term expires May, 1894.

SAVORY C. HATHAWAY, appointed April 28, 1893; term expires May, 1896.

The above Board under the same act, constitutes the Park Commissioners.

CLERK.

DANIEL B. LEONARD, City Clerk.

SUPERINTENDENT OF PUBLIC WORKS.

ALBERT B. DRAKE.

REPORT.

CITY OF NEW BEDFORD,
OFFICE OF BOARD OF PUBLIC WORKS,
ODD FELLOWS BUILDING, December 31st, 1893.

To the City Council of the City of New Bedford.:

GENTLEMEN:—The Board of Public Works herewith submit their fifth annual report, for the year ending December 31st, 1893.

PUBLIC WORKS.

At the first meeting of the year 1893, the Board organized with Hon. Jethro C. Brock, Mayor, Chairman; Morgan Rotch, Thomas B. Tripp and George F. Bartlett.

Owing to illness, Samuel C. Hart, President of the Common Council, was absent. He appeared and was qualified at a meeting held February 20th, 1893.

Mr. Tripp resigned April 17th, 1893. We record here an expression by his fellow members of their appreciation of his constant and faithful attention to the duties of the office, the careful investigation of all problems under consideration, and the good judgment and practical knowledge always at the service of the members.

Savory C. Hathaway was appointed and confirmed as a member of the Board, and qualified.

Albert B. Drake was re-elected Superintendent of Public Works. Fifty-four meetings have been held during the year, many hearings given, and visits paid to localities calling for improvement.

The City Clerk, who by statute is clerk of this Board, not having the time to attend its meetings, the City Council appointed William S. Cook, Assistant City Clerk. Mr. Cook now acts as clerk of the Board.

The lateness of the season to which the stone crusher at the City Yard had to be run to meet the orders of this board, demonstrates the need of a larger crushing plant to allow of the work being completed in its proper season.

We have tried to meet the demand for new macadam, and being limited by the capacity of the crusher at the City Yard, the repairs have been somewhat neglected.

We would recommend the purchase of a much larger crusher, as suggested by the Superintendent.

No work of grading streets has been undertaken beyond pressing demands.

The statement of the Superintendent in relation to the acceptance of the betterment law, as applied to street improvements, should be given more than a passing glance.

If the improvements made were only partly paid for by the abutters it would reduce the net outlay to the city and increase the number and extent of the improvements now being constantly called for.

We would suggest that you accept the betterment law as applied to street improvements.

During the past year Acushnet avenue has been block paved from High to Campbell, and from Willis to Pearl streets.

We would suggest a liberal appropriation for this work, believing it to be for the best interest of the city.

We believe the time has gone by when main thoroughfares should be paved with cobbles. The constantly increasing item of repairs to cobble paving shows at once its failure to meet requirements. Cobble paving is cheap in first cost, but when applied to much travelled streets is a source of constant expense to the city, a menace to the safety of horses and vehicles, and a nuisance to the public, obstructing streets in cases of repair.

That a much heavier outlay is necessary to meet the growing demands, must be apparent to all.

The following statements are inserted as being worthy of thought and consideration.

Year.	Population.	Net Expenditure of Appropriation on Highways and Sts.	Total General and Special Appropriations for the City.	Per Cent. of Highways & Streets Expenditure to the Total Appropriations.	Cost per Inhabitant.
1850,	16,443	$13,185.62	$89,559.88	14.72	$.80
1855,	20,389	39,964.03	201,678.12	19.81	1.94
1860,	22,300	34,890.35	197,000.00	17.71	1.56
1865,	20,853	22,005.03	362,500.00	6.07	1.05
1870,	21,320	About 33,172.72	358,225.00	9.26	1.55
1871,		37,779.50	422,231.11	8.94	
1872,		48,054.88	467,150.00	10.28	
1873,		47,000.00	445,200.00	10.55	
1874,		63,000.00	457,990.55	13.75	
1875,	25,895	73,400.00	474,300.00	15.47	2.83
1876,		60,000.00	488,039.69	12.29	
1877,		51,000.00	498,200.00	10.24	
1878,		40,804.75	402,427.28	10.14	
1879,		62,698.80	437,238.00	14.34	
1880,	26,845	76,016.62	439,291.45	17.34	2.83
1881,		66,195.89	547,100.00	12.10	
1882,		76,896.13	501,573.87	15.33	
1883,		75,348.54	619,039.96	12.17	
1884,		81,679.35	653,832.49	12.49	
1885,	33,393	84,861.70	577,176.80	14.70	2.54
1886,		81,972.11	588,313.43	13.93	
1887,		78,985.27	598,926.80	13.19	
1888,		90,752.96	618,972.54	14.66	
1889,		77,991.01	773,094.56	10.09	
1890,	40,733	104,142.79	755,811.62	13.78	2.55
1891,		109,917.01	790,185.88	13.91	
1892,		132,653.02	1,051,333.24	12.62	
1893,		115,131.71	906,068.58	12.70	

The average appropriation and population, by periods of five years each, appears as follows:

Period.	Average Available Appropriation.	Average Population.	Rate per Inhabitant.
1870 to 1875,	$45,801.42	23,607	$1.94
1875 to 1880,	57,580.71	26,370	2.18
1880 to 1885,	75,227.30	30,119	2.49
1885 to 1890,	82,912.61	37,063	2.24

The sum of money placed at the disposal of the Board has limited the length of new curbing laid far below what it should have been to meet the growth of the city.

The addition of one and one-half miles of curbing, when the average length of streets accepted during the past sixteen years is about two and one-half miles per year, seems entirely inadequate, when it is remembered that the annual increase calls for nearly five miles of curbing.

To bring this subject to your attention in actual figures, the following table of streets accepted during the past sixteen years is presented:

Year.	Length in Feet.	Length in Miles.	Number of Streets.
1878,	2,040.78	.39	3
1879,	14,162.86	2.68	10
1880,	1,827.20	.35	3
1881,	9,731.40	1.84	10
1882,	11,707.10	2.22	12
1883,	8,804.79	1.67	9
1884,	12,120.50	2.30	12
1885,	14,493.94	2.745	19
1886,	10,922.09	2.07	11
1887,	6,597.36	1.25	7
1888,	25,133.35	4.76	25
1889,	13,854.61	2.62	17
1890,	19,483.23	3.69	18
1891,	20,273.57	3.84	24
1892,	28,638.12	5.424	31
1893,	24,240.54	4.591	22
	224,031.44	42.43	223

We would suggest a more liberal policy to enable the department to meet the growth, even if no gain is made.

We are called upon to face a problem that is ever growing in the matter of the repair and extension of flag and concrete walks.

We have made the best use of the means at the disposal of the Board, during the year, but we think that the time is near when larger sums must be applied to this important improvement. The remarks of the Superintendent on this subject should be considered.

We believe that the bank wall at Clarks Cove should be continued, and therefore recommend an appropriation for that purpose.

Street cleaning has been systematically followed during the year. The introduction and use of the portable barrels seems to have met with favor. The introduction of public waste barrels at certain fixed points, as suggested by the Superintendent, is worthy of trial.

The suggestion of procuring a dumping ground at the south end is made, and in this connection the suggestion of combining the dumping ground with the extension of the park system, is worthy of consideration.

The new building at the City Yard has provided the work rooms so much needed.

The appeal of the Superintendent to fit up the machine shop with tools and power is worthy of consideration.

We would call your attention to the remarks of the Superintendent on widening and extending streets, as being worthy of consideration, some of which it would be well to adopt.

The grade of Front street, between Howland and Grinnell, has been raised, with the consent of the abutters.

It is the opinion of this Board that the raising of the grade of many of the streets in the districts near tide water should be undertaken at an early date.

An estimate of the amount of work ordered and still remaining on file is as follows:

Ordered previous to January 1st, 1893,	$50,275.00
Ordered during 1893,	12,160.00
Total,	$62,435.00

As it was evidently your wish to place the engineering work under the charge of the City Land Surveyor, by a vote of the majority of the Board, the office, with all plans, books, etc., was turned over to that official.

Your honorable body has under consideration the abolishing of grade crossing of streets with the railroads. As the Board is charged with the care and maintenance of streets and ways, we would suggest that we take part in the discussion of this important subject.

The remarks of the Superintendent on this subject are certainly worthy of consideration and thought, as he has been in a position to study and investigate this subject, with a thorough knowledge of the conditions.

The remarks of the Superintendent with relation to the construction of an intercepting system of drainage to improve the condition of the docks and harbor, and remove the drainage of the city to some distant point, is well worth serious consideration. Meanwhile we would suggest a liberal appropriation to meet the needs of the present in abating the nuisances named, the most costly being the extension of Bonney street sewer to Clarks Cove.

The sewers built the past year have not kept up to the demands made.

We would call your attention to the figures of the Superintendent relating to the cost of building private sewers (so called.) It must be borne in mind that these sewers are in contemplated streets which in a few years will be calling for acceptance. The lowering of the Union and William street sewers has been quite costly, owing to the amount of ledge encountered. Its need is fully demonstrated by the immediate

call for the additional lowering of the Pleasant street sewer, from William street south to Market street, to provide drainage for the new four story building to be erected for the use of one of the daily papers at the southwest corner of Pleasant and Market streets.

These sewers are laid on a final grade of 16 feet to the bottom of the pipe.

The use of a Carson Excavator during the work of lowering these sewers has demonstrated the usefulness of these machines. We believe in the purchase of a machine to go with our hoisting engine.

The quantity of rock encountered during the year has fully shown the convenience and importance of the steam drills. We agree with the Superintendent that four more drills and two boilers would be a desirable addition to our steam plant, believing it to be most economical to do the work in its proper season.

The systematic expenditure of $10,000 each year for the lowering of sewers should be undertaken. This will not make a particularly heavy drain on the resources of any one year.

No work beyond actual necessity has been undertaken on the contemplated parks, a majority of the Board not thinking it advisable to spend money for such work.

The conditions under which the United States Government granted the use of the fort property at Clarks Point, called for the expenditure of some money.

To accomplish this the stone that has lain scattered over the ground for years was used in the construction of a wall around the fort. This wall is built at or near ordinary high tide.

The accompanying report of the Superintendent gives the work of the department in detail.

Respectfully submitted.

J. C. BROCK.
MORGAN ROTCH,
GEO. F. BARTLETT.
SAVORY C. HATHAWAY.

Report of the Superintendent.

City of New Bedford,
Office of the Superintendent of the Public Works,
Odd Fellows Building, December 31st, 1893.

To the Board of Public Works:

Gentlemen.—I respectfully submit the following report of the department for the year 1893, with such suggestions of improvements as in my judgment should be called to your notice.

HIGHWAYS AND STREETS.

Financial.—I wish to call your attention to a state of things under this head that should be avoided in future:

During the past year the appropriation for highways and streets has been placed under 19 accounts. All credits from these 19 accounts were received by only two accounts and again doled out to cover shortages in the various other items.

This has complicated accounts to such an extent as to create misunderstandings. For instance, we show in our department accounts the net or actual cost of each item of improvement.

The Auditor shows at the same time only the gross cost with no credits. This is very misleading.

The accounts of this department are open to the inspection of any citizen. I would suggest that you extend an invitation to the incoming City Government to visit the office and inspect the work of the department.

Macadam.—While the work accomplished under this head is very creditable with our present machinery, I would wish to impress on you the fact that we are steadily losing ground in keeping up repairs of old work and in accomplishing very much at new work.

The heavy traffic on our macadam streets is constantly increasing and with this increase the wear and tear increases in proportion. Many of our main thoroughfares are sadly in need of repair.

I would simply add that we are farther behind than ever before in the repair of our macadam streets. We now have $28\frac{14}{100}$ miles of macadam.

In October I reported to you a hurried list of macadam streets needing repairs and of this list marked as dangerous 11,400 feet of main thoroughfares.

After thoroughly repairing two blocks or about 400 feet in length, no further repairs were undertaken, and by your order, new work was begun on Ash street, from Union to Arnold street; Austin street from Ashland to Cedar street with the centre crusher, and Front street from Wamsutta to Logan street, with the portable crusher.

While these streets called for the improvement without doubt, it was my judgment then, and is now, that it is a bad policy and costly to the city, to allow streets to get so sadly out of repair.

The centre crusher should surely have been kept on repairs the remainder of the season.

To the 11,000 feet or two miles of streets mentioned above it will be necessary to add about one mile as needing repair early in 1894.

I would urge early action in this very important matter.

The following thoroughfares urgently call for repairs:

Weld street, Purchase to Pleasant street.
Shawmut Ave., Grand to Sutton street.
Shawmut Ave., Parker to Durfee street.

Mt. Pleasant street, from Durfee street to D. A. Snell's.
Pleasant street, Weld to Linden street.
Pleasant street, Pope to Campbell street.
County street, Merrimac to Campbell street.
County street, Sycamore to Kempton street.
Court street, County to Park street.
Court street, Lindsey to Reed street.
Reed street, Court to Kempton street.
Rockdale Ave., Kempton to Maxfield street.
Sixth street, Madison to Russell street.
Sixth street, Bedford to Wing street.
Fifth street, Bedford to Wing street.
Second street, Union to Spring street.
Cottage street, Allen to Grove street.
Dartmouth street, Cemetery gate to Rockdale Avenue.

Add to this a long and growing list of cross streets and streets of only local interest, and you will realize that the item of repairs will make a large hole in the next appropriation.

A bill of $6,711.22 from the Howland Mills Corporation, for work done in 1892, was brought forward to 1893, for the purchase and erection of a larger crusher, engine, elevator screen and stone pocket. This credit the finance committee used for other purposes.

Early in the year a committee of the Board, Messrs. Brock and Tripp with Mr. George F. Bartlett of the Board, the Superintendent, and George F. Doe, the department mechanic, visited Boston and looked over a large jaw crusher, and a rotary crusher at Salem, Mass. No action was taken as Mr. Tripp resigned in April.

Later a committee was appointed consisting of Messrs. Brock and Hart and the Superintendent. This committee was never called together.

I would renew my recommendation of a year ago.

"A new crusher at the city yard is an imperative necessity and I would suggest that a new one of double the capacity be procured, with boiler and engine. The boiler and engine that now operate the old crusher to be used for power and heat in the new building just built at the city yard."

This being the case one year ago, and having run behind the requirements this year, the case is only the more urgent.

Over 3 miles of the $28\frac{14}{100}$ miles of macadam will call for repairs in the spring of 1894.

The delay in procuring a larger crusher during the year has only added to the burden of the next.

The portable crusher was first used to macadam the County road, north of the Skiff road, where 2860 tons of stone had been accumulated in 1892 for this work. After standing idle for some time it was loaned to the St. Lawrence cemetery at the cost of repairs and brought directly from there to its present location on Hicks street.

At this location it has furnished the stone to macadam Front street from Wamsutta to Logan street.

Part of this stone was put in position after the ground had frozen and is at present badly rutted.

This should be repaired the first thing in the spring. Macadam roads built when the frost is in the ground will be very unsatisfactory and expensive.

The following is the cost of crushing as we have it charged:

CENTRE CRUSHER.

1,594 tons of stone at 36.99 cents per ton.
14,878 tons of stone at 50.14 cents per ton.

16,472 tons of stone crushed at an average cost of 30.51 cents per ton, exclusive of the cost of the stone.

PORTABLE CRUSHER.

2,860 tons of stone on hand January 1, 1893, Acushnet avenue, north of Phillips road at 48.87 cents per ton.
1,730 tons of stone, Acushnet avenue, north of Phillips road, at 40 cents per ton.
156 tons of stone, Acushnet avenue, north of Phillips road at 27.16 cents per ton.

935 tons of stone, Hicks street, east of Acushnet avenue, at 50 cents per ton.

560 tons of stone, Hicks street, east of Acushnet avenue, at 28.66 cents per ton.

6,241 tons of stone crushed at an average cost of 42.29 cents per ton, exclusive of cost of the stone.

Streets Graded.—The work done has in no way equalled the demand and need of such improvement.

I will not call your attention to special needs as the urgent demands will far exceed the sum of money available for this work.

In these days of economy and pressing calls for improvement in new territories, I would again call your attention, and if it meet your approval, the attention of the City Council, to the need of accepting the betterment law, so that the whole or a part of street improvements in new territory will be paid for by the owners who are benefited.

This may be a rather radical view, but I would impress on you the fact that we are not keeping up to the growth, and that many citizens and owners of real estate would willingly pay for street improvements if only assured of getting them when they want them.

It will build up new territory at little expense to the city and allow of the city doing more work and extending improvements much faster to meet the actual live needs.

To illustrate. The man who throws open a new street through his land at this time, has to wait the will of the Board of Public Works which under its present form, changes each year; this may mean one month or five years.

If the man by an outlay of one to two dollars per rod on the abutting property, could be assured of a city highway properly graded, it would be for his benefit to pay the cost, for the value of the abutting property would increase at once.

Building improvements on such real estate are rapid and soon follow the opening of the street.

Cobble Paving.—To express my view on the general subject of cobble paving, I would quote from my last report.

"I would call your attention to the great need of more permanent improvements to the paved streets. The laying of cobble paving should be discontinued in all streets subjected to heavy teaming. The heavy teaming during the past few years has increased with the unusual growth of the city.

Streets that formerly stood the travel very well with cobble paving, when the city was little more than a large town, cannot stand the traffic to which they are subjected in a rapidly growing city.

With this rapid growth of heavy traffic, I am sorry to record the fact that narrow tired wheels are being more generally used. The weight carried in heavy traffic is from one half ton to three tons or more per wheel. The slipping and sliding of narrow tired wheels, from the top of a cobble stone to the space between, soon picks out all the weak spots, the street becomes rutted, and the passage of a heavy cart over such a street is a succession of slips and jolts dropping into one depression, only to climb out and drop into the next one. The cost to the teamsters of the city from this source alone must be a very heavy item each year for repairs.

Summer street from Kempton to Parker has been paved with cobbles both sides of the railway tracks, but while in good surface condition, the teams avoid it as much as possible.

Several short sections of streets have been treated in the same way.

Block Paving.—Block paving on sand foundation has been laid in Acushnet avenue from High to Campbell street, and Willis to Pearl street; on William street, from Second street to Acushnet avenue, and on Weld street, from Purchase street east to the track of the Union Street Railway Company, leading into their car house.

The relaying of water pipe and sewers in Union and William streets has torn up the block paving already laid to such an extent that a large section will need to be relaid the coming year.

Block paving should be laid on a concrete foundation if the conditions are such as to warrant its being undisturbed a number of years. In our own case, a young vigorous growth has taken possession of the city. This growth causes a constant upheaval of the street surface for the introduction and repair of the conductors of the various conveniences that are located there.

Now these are water, drainage, gas, electric light, and soon telephone and telegraph and other modern conveniences will follow.

With such a state of upheaval constantly before us, I am not prepared to say it is wise to undertake such permanent work at present, unless the street is built up on both sides with buildings that will meet the requirements of a growing city for several years to come.

I would suggest the purchase and use of 300,000 blocks the coming year. There is plenty of space in which to introduce this improvement.

Water street is a constant bill of expense to maintain with its present surface of cobble stones, and should be block paved.

Acushnet avenue from Pearl to Wamsutta, Logan from Acushnet avenue to Bowditch, Bowditch street from Logan to Weld, Weld street from Bowditch street west to present block surface, would take care of the heavy teaming from the freight yards of the railroads on Weld Street and Acushnet avenue.

Union street from Front to Purchase street should be block paved.

Purchase street should be block paved as soon as the cobble paving requires repairing.

The first cost of block paving is a heavy item, but the repairs are light to offset this.

Take Water street for instance, paved with cobble its entire length except one block, between William and Union streets.

The following is a statement of repairs:

Length about 8800 feet.		
Repair to cobble paving,	1889,	$1,799.41
" "	1890,	79.08
" "	1891,	1,687.50
" "	1892,	1,308.05
" "	1893,	1,670.45

To this should be added the wear and tear of vehicles jolting over the cobble paving which must necessarily cause expense, even in its best condition, the delay and inconvenience caused each year by the closing or partial closing of portions of the street to travel. The cost to citizens direct is an unknown quantity and I have no means of correctly estimating it.

These expenses will grow heavier with the teaming each year, from Union street to Gifford this is especially true.

To block pave this street would cost about $58,415.

To cobble pave this street would cost about $11,683.

To pave this street from Union to Rivet street would cost (length about 4800 feet):

Cost to block pave about $31,445.

Cost to cobble pave about $6,289.

Curbing.—The decrease in the length of curbing laid the past year only increases the burden of the coming years.

The annual acceptance of streets during the past 16 years averages $2\frac{1}{2}$ miles per year or about 13,200 feet of streets. This length of streets would call for about 26,000 feet of curbing alone.

I would suggest 40,000 feet of curbing as the least length to meet the requirements of the coming year.

The call for curbing in the tenement house districts is most urgent, and the growth of the city is pushing beyond the

present range of good walks faster than the improvements have been made.

A curbing at once defines the sidewalk and keeps carriages and horses off the walk that should be reserved for foot travel only.

Crosswalks.—5000 feet of 24-inch crosswalk should be purchased in 1894, to meet the demands.

Concreting.—I would complain again that we are rapidly drifting behind on this much needed improvement.

Only about two miles have been laid of new walks, when it should have been five miles or more of new work only.

The repairing is constantly with us and ever growing.

I would renew my suggestion of a year ago that the force be doubled, and the work be pushed out on some of the main lines of foot travel, regardless of petitions, in order to accommodate the public.

Flagging.—Under this head I wish to call your attention to the large number of flag walks around the central part of the city, that are a source of danger to foot travel, and cannot be relaid with the old stones. All main lines of travel should be renewed with flagging. I would suggest that prices for the present limit of width of not less than 2 feet and for a width not less than $2\frac{1}{2}$ feet, be called for in the request for bids, the coming year. If the size of the stones can be increased at a slight increase in cost it will be an improvement, being cheaper to lay, lying better in the walk, and being less liable to call for repair at an early day. I would urge that the present demand calls for not less than 50,000 square feet.

Bank Walls.—Nothing has been done the past year on the wall at Clarks Cove.

I would suggest that the work on this wall be continued, the roadway filled in and the heavy stone capping as shown at the

foot of Crapo street be continued. This stone capping could be contracted for as winter work in the ledges at much less cost than during the summer.

Street Cleaning—Street cleaning has been followed more systematically than ever before and its good effect has been apparent.

Four portable barrels or "hokey pokey" carts have been in use during the year. As a result of their use I would recommend that the number be increased to eight.

I would also suggest their use during the fair days of winter weather around the center of the city, believing that the cleaning of waste paper, tin cans and other refuse is a public benefit.

I would suggest the placing of public waste barrels at various points in the city. It will not take long for the public to appreciate and make use of them.

At such points as the Post Office, the banks on Water street, the fruit and peanut stands, this will save the littering of the streets with all sorts of light refuse.

Ashes and Rubbish.—This item has increased during the year, which is a necessary result of the growth of the city.

The distance to which this refuse is hauled will also be an added expense.

I would offer the suggestion that the marsh bounded by Crapo, Rivet and Orchard streets and the Cove road would make a very desirable addition to the park system of the future, and at the present would make a most desirable dumping ground for years to come.

Very little complaint, compared with former years, has been made by residents on new streets where rubbish has been dumped. The credit for this belongs to the Board of Health.

Cost of collecting ashes and rubbish,	$8,311.53
Credit from various accounts for filling,	1,635.58
Net cost to Highways and Streets,	$6,675.95

Of this sum $6,366.31 is charged in the account of streets filled and graded.

CITY YARD.

City Stable.—Part of the quarters in the south shed so long occupied by No. 5 Engine Company as a temporary home, has been utilized as a home for teamsters. Each teamster has a closet in which to store his belongings, coats, rubber clothes, whips, or other personal property. Each man, if he so desires, can lock his closet by purchasing a padlock.

This room is provided with a stove and seats.

A section of the south shed has been partitioned off, with concrete floor, for the use of the Water Works Department.

The need of more shed room is apparent. We have temporarily overcome this difficulty by roofing over the entrance between the sheds north of the stable and storing wagons there. A shed should be erected on the north side of the west lot, along Maxfield street. It is very much needed.

A fence should be built around the property as a large amount of light material is taken each year.

Teaming.—No horses have been bought or sold during the year. One has died. We now have 35 horses. I would suggest that 3 horses, more or less crippled, be sold and replaced with sound horses.

No. 5 Engine Company left us a relic in the shape of an arc light at the S. E. corner of the stable. This light has been retained for use in the stable yard, and is of great service at evening in the short days of winter, and especially of service at night in cases where it is necessary to get out teams, whenever calls are made for their use,—accidents, fallen trees, washouts, etc.

STABLE AND TEAMING ACCOUNT.

Stock on hand, January 1, 1893 (horses, teams, harnesses, hay, straw, grain, etc.),		$13,881.75
Gross cost for 1893,		$31,852.54
		$45,734.29
Received From Water Works (board of horses),	$711.94	
From Fire department(board of horses),	478.29	
For stable dressing,	421.44	
For pork,	47.93	
For labor in machine shop,	4.00	
For labor furnished Fire department,	90.00	
From sundry persons,	31.27	
Stock on hand January 1, 1894 (horses, teams, harnesses, hay, straw, grain, etc.),	$11,333.75	$13,118.62
Cost of teaming, (this includes repairs of buildings and revaluation of stock on hand, resulting in a shrinkage of $2,548),		$32,615.67
Charged for work teams have done,		$28,429.50

TEAMING NOTES OF INTEREST.

Cost of hay, straw and grain,		$5,266.62
Paid hostler, assistant and night watchman,		2,405.00
		$7,671.62
Received from Water Works for board of horses,	$711.94	
Received from Fire Dept. " " "	478.29	1,190.23
		$6,481.39

DEPARTMENT HORSES.

Working horses,	34
Driving horses,	2
Superintendent's horse,	1
Total,	37

Horse Shoeing,	758.45
Harness repairs,	611.96

CARTS IN CONSTANT USE.

Double carts,	11
Single carts,	11
Express wagon,	1
Total,	23

EXTRA CARTS, ETC.

Express wagons,	2	
Sundown,	1	
Lumber wagon,	1	
Light driving wagons,	2	
Water cart,	1	
Jigger,	1	
Single gear,	1	
Derrick gears,	2	
Sleigh,	1	
Road Scraper,	1	
Street sweeper,	1	
Carts repaired,		2,098.82
City stable repairs,		356.04
Miscellaneous, including coal, lights, medicines, medical services, etc.,		622.02
Hire of horses and carts (while horses were sick or teams were being repaired,		93.25
		$11,021.93

In addition have hired teams as follows:

Single teams at $2.75 per day,	$1,155.15	
Single teams at $3.00 per day,	2.411.28	
Double teams at $4.50 per day,	1,687.00	
Double teams at $5.00 per day,	6,750.73	$12,004.15

Blacksmith Shop.—The blacksmith shop has been in its new quarters nearly the entire year. Few new tools have been added.

When power is applied in this shop for blowing it will increase its efficiency.

The usual statement of work done follows:

BLACKSMITH SHOP.

Stock on hand January 1, 1893,		$1,808.98
Gross cost for 1893,		3,913.81
		5,722.79
Charged to Sewers,	$1,784.22	
Water Works,	22.19	
New Bedford and Fairhaven Bridge,	7.53	
Parks and Squares,	113.37	
Fire department,	6.70	
City property,	2.50	
Sundry persons,	38.50	
Stock on hand January 1, 1894,	1,534.09	3,509.10
Cost of blacksmithing to highways and streets,		$2,213.69

This includes the following charges, at lowest prices, to various accounts of highways and streets:

One new cart, repairing and rebuilding old cart,	1,378.20
Horse shoeing,	699.76
Repairs in stable,	64.62
Repairs on steam road roller,	72.44
Repairs in machine shop,	36.65
Repairs on crushers,	194.76
Repairs on street sweeper,	15.10
Repairs on tool houses,	14.20
Repairs in carpenter shop,	37.93
Repairs on carriage shed,	2.30
Repairs on stone roller,	6.70
Repairs on hokey pokey carts,	1.70
Repairs in paint shop,	2.80
Repairs on concrete heater,	2.48
Miscellaneous repairs to tools, etc.	1,012.00
	$3,541.64

Machine Shop.—This shop is occupied mostly as a storeroom, I would urge upon you the necessity of at once fitting the shop with a good lathe, upright drills and tools to meet the emergencies that are constantly arising. We have a competent foreman in charge of this shop and it will be a good investment for the city to fit the shop with needed tools and power.

It might be well to call your attention to our steam plant here, which is constantly calling for more or less repair and attention.

1 Steam road roller.
2 Crushers.
2 Engines and boilers.
1 Elevator and screen at stone pocket.
5 Portable boilers.
8 Steam rock drills.
1 Steam pump and engine.
1 Hoisting engine and boiler.

To this we add the endless demand usually made upon the machinist.

Carpenter Shop.—The new shop is occupied and in every way furnishes first class quarters, being light and roomy.

We have a saw table, but are unable to use it for heavy work as the power from the electric motor in the machine shop is not sufficient.

I would suggest the addition of a band saw with the power. The paint shop is little used in summer except to repair sweeper brooms.

Tool House.—The building in the S. E. corner of the Yard, formerly occupied by the blacksmith, has been used as a tool house during the year. It gives sufficient room to allow the tools being stored in proper shape for immediate use.

Widening and Extending Streets.—The widening of Pleasant street 10 feet on the east side, between Union and William streets has been accomplished, and the east walk will be opened for travel early in the spring.

Another improvement in this locality would be that suggested by Hon. Charles S. Ashley: the removal of the walk around City Hall square to the inside of the trees adding almost the entire width of the present sidewalks to the streets.

The erection of expensive buildings on Purchase street will probably prove a serious obstacle to the widening of that thoroughfare between Union street and Mechanics Lane. No more buildings should be allowed to go up on this street where widening has been in contemplation, between Elm and Maxfield streets on the west side, unless it is your wish to abandon the scheme of widening.

The widening of Pleasant street from Kempton to Weld street and of Fifth street from Union to Grinnell street, should be projected and all future improvements should conform to this idea.

With Fifth street extended through to County street at South street in connection with the proposed widening, you would have a fine wide street extending the entire length of the city from the cove to Weld street and connecting with Acushnet avenue to the north.

Acushnet avenue should be extended in a straight line to intersect County and Cove streets, giving a straight though narrow thoroughfare through the city and extending indefinitely beyond the city limits.

Contemplated Bowditch street should be projected north of Tarkiln Hill road to intersect the Phillips road at Acushnet avenue.

This extension will shorten the distance traveled to the Phillips Road about one-half mile when completed. No expense will be met with at present.

Park street should be extended north to Shawmut avenue. This would give a street across the west part of the city north from Arnold street.

This should be done in advance of building, as I understand that the land is cut up and offered for sale in small lots.

Now that Second street is an open and accepted street from Cove street to Maxfield street, I would suggest that some arrangement be made with the Potomska Mills Corporation, with

relation to the removal of 2 houses between Rivet and Blackmer streets, and the straightening of that section so as to make a practically straight street from end to end.

These buildings could be moved back at little expense and the land will never be cheaper than now. This should meet with early consideration.

Street Grades.—During the year Front street from Grinnell to Howland street has been raised by consent of the abutters to an elevation beyond ordinary floods.

I would suggest that Water street between Howland and Grinnell streets next receive attention. Several times during the year I have driven through this section axle deep in water.

This state of things should cease. I would quote from one of my previous reports, what seems as applicable to-day as it did at the time of writing:

"The grades of several streets should be changed before the erection of costly buildings takes place.

The grades of all low streets near tide water should be raised to such an elevation as will insure drainage.

In two places in Water street, at Cannon and between Howland and Grinnell, a rise in tide of two feet above ordinary high tide has several times flooded the street. Several other streets are entirely too low. Rivet street, between Second and Acushnet Avenue, should be regraded, so as not to allow water standing in the street."

Engineering Department of the Board of Public Works.—During the two and one-half years in which this department was in my charge, under the direction of the Board, it was put on as complete a working basis as the time and money would allow.

I was, and still remain, very proud of the completeness of the working material accumulated during this time, having furnished it at cost, with copies of available material and plans re-

lating to city work, which I had accumulated in my own private business of Civil Engineer.

In April of this year this office, with all contents, plans, etc., was turned over to the City Land Surveyor, and the Board passed an order that the Superintendent do no surveying work.

This has stood ever since, in spite of the fact that the City Solicitor gave his written opinion that the Board could not legally turn its notes, plans, etc., over to any one.

This move has been detrimental to the work of the department and certainly has increased the cost of the work done. The decreased expenses of the Public Works department has called for no such amount of work as during either of the past two years.

The City Land Surveyor is an officer of the City Council and in no way responsible to the Board or under its control.

The division of your authority between the Superintendent and an officer not responsible to you or to the Superintendent, places your main source of information beyond the reach of your executive officer who should have free access to it.

In order to obtain the best results, this department should be under the control of the Board of Public Works. By this I do not mean to include all the work of the City Land Surveyor, but merely that part which is properly under the control of the Board of Public Works.

In connection with this department, I wish to refer to the loss of one of its most valued assistants.

Walter J. Channing died November 4, 1893, after a lingering illness of many months.

He came into the engineering department in its early days and to his patient and careful work we owe much of the accurate working material in that department.

ABOLISHING GRADE CROSSINGS.

This subject has been considered by the City Council during the past year and a report was rendered to them this month.

This is a subject in which you as a body are interested, especially with relation to the streets of the city, and I would urge that you take part in this interesting work for the good of the public.

As a result of my consideration of the subject I deem it worthy of further consideration and thought. To illustrate. Quoting from the said report:

"Another scheme, that of depressing the tracks, might be suggested, but the connection with the Fall River Branch, which at present approaches the main line with a very steep grade, and also the serious interference with the city's drainage scheme and many other difficulties, render such a scheme unworthy of consideration."

To the first objection I would call your attention to the dangerous grade crossing at Mt. Pleasant street on the Fall River Branch, and also to the fact that Mt. Pleasant street is at the summit of the grade on said track. That is to say, the grade of the railroad track at Mt. Pleasant falls to the west and east.

If the grade was changed from the valley 600 feet west of Mt. Pleasant street, east to the Old Colony track, passing under Mt. Pleasant street, doing away with this dangerous crossing, eliminating the high bank west of the Old Colony track, it would reduce the problem of future street grades in this territory at once.

This can be done with the Fall River Branch without sharpening the grade. In fact the grade could be much reduced, if the railroad so wished.

The second objection, "the serious interference with the city's drainage scheme."—To this objection I would state that only three sewers cross the railroad track.

The one at Logan street can be changed at a cost not to exceed $3000, to give a depth of 12 feet on top of the brickwork of the sewer.

At Sawyer street sewer, a depth of $10\frac{1}{2}$ feet can be carried over the present brickwork. A depth of 2 or even 3 feet more can be obtained at a cost not exceeding $500.

A small pipe sewer crosses the track at the Oneko mills to connect with the Purchase street sewer.

It is contemplated and will soon be demanded that Purchase street sewer be lowered and enlarged, from Sawyer street to this point, 1200 feet.

If it was deemed inexpedient to lower the sewer at the time of this improvement, the pipe sewer could be carried this 1200 feet in the proposed railroad cut to Sawyer street at a cost not exceeding $1500.

These sewers would be very necessary in draining the roadbed if the tracks were depressed.

I think that the tracks should go under rather than over the streets, if possible.

With the tracks depressed to a depth of 12 to 15 feet and the streets raised 5 to 8 feet to give sufficient headroom for train work, there would be no permanent obstruction to light and air, and no eyesore, such as an elevated structure would be.

This subject could be discussed at length but I only give this to call your attention seriously to the disfigurement it would be to the city and its streets, if the tracks should be elevated throughout the city north of Wamsutta street; also that this question may be given careful study and consideration. And who of all others should take an active part in this subject if not yourselves who, under the laws of Massachusetts, are responsible for the streets of the city?

Drains.—The continued practice of laying and repairing all drains in the street continues to give the best results.

I would suggest that the Board consider the subject of lay-

ing all drains from the sewer to the property line at a minimum grade, giving the greatest depth obtainable with a drain on a standard grade.

While this is putting the owner to quite a little extra expense at present, you must realize that our city will keep up its growth until it ranks with the larger cities.

While it seems an unnecessary expense to the casual observer, to the man who gives it thought it will seem a poor policy to be constantly digging up the streets to lower drains. This will surely follow as a natural result of the erection of new and larger buildings.

The usual table of drains laid and repaired during the year is appended.

SEWERS.

The past year seems to have been unusually prolific with suggestions of ways and means of using money for public improvements.

If such costly improvements are undertaken, I wish to call your attention to the need of a system of drainage that shall remove the flow from our sewers into the harbor and Clarks Cove, of all but storm water.

This will improve our docks and the health and welfare of the whole city.

It is my humble judgment that this is a subject ranking first in importance, and I would respectfully submit that you should put forward the claims of your department in this line to be considered by the City Council, when considering the broad question of public necessity.

I have made this subject a study for nearly ten years and should be pleased to formulate and work out the details for your inspection.

The practical needs of the present must necessarily be met, but ultimate needs and requirements should not be lost sight of.

This work should be planned to meet all the requirements of the future, and the completed system should always be kept in view. To construct a portion of this system, with a temporary outlet to meet present needs, will be expensive.

Meanwhile temporary relief should be given in the following localities: Merrimac street at the Holy Acre should be provided with an outlet that will take the dry weather flow at least into deep water, allowing the present outlet to take the storm water.

Howland street sewer outlet enlarged, and relaid to meet present needs.

The dry weather flow of the Crapo street sewer should be taken out beyond low tide.

The Bonney street sewer should be extended to Clarks Cove without delay and the dry weather flow treated as suggested for Crapo street sewer.

The present drainage of a large area now flows through the Bonney street sewer and is dumped upon the flat marshy land 1800 feet from Clarks Cove, which it reaches through a shallow, crooked creek, about 2400 feet in length, which was the outlet of Crapo street sewer for about 20 years. This will be impressed upon you more forcibly, when it is noted that the marsh at the end of the present sewer is at about the same level as ordinary high tide in Clarks Cove, 1800 feet away. No delay should be allowed in this case.

Grape street sewer should be extended to intercept the brook west of Rural street. This would render available for burial purposes all the land in Rural cemetery, allow the building up of the land south of the cemetery, which is now flooded during the spring and fall, also save dangerous washing of our roads and highways.

Several petitions are now on file for sewers in the valley of this brook north of Allen street, but no relief can be afforded until such time as the sewer is extended north from Grape street.

Tripp brook sewer should be extended to Maxfield street and the swamp from Maxfield street north, the full width, should be condemned for park purposes.

This would make a beautiful spot of what threatens to be a menace to the health of that section of the city.

It would allow of the present shallow system of sewers being extended, meeting all future requirements on the adjoining high land, admitting of a broad, nearly level, and easily maintained highway extending north to the ledges at Hathaway road. This park way could be extended north and east through cheap land to Brooklawn Park.

The sewer in Acushnet avenue from Campbell to Willis streets should be relaid at an early date.

Coffin avenue sewer should have been built during the past year, but owing to the refusal of the city council to refund the money taken from this account, no work could be done.

The work of the past year is fully set forth in the tables appended.

I must urge upon you that it is a mistaken policy to refuse to build sewers at private expense in projected streets, when such sewers are given to the city, and to illustrate my statement would call your attention to my report of 1892.

Of 27 sewers on which sewer assessments could be legally collected, the cost to the city was $10,978.00. This is lower than it should be as part of the cost of the sewers was paid in the previous year, and correspondingly higher for the assessments on abutters, at the same time of $13,255.55.

The length of sewers assessed 13,664 feet.

Cost to the city 80 cents per foot.

Cost to abutters 97 cents per foot.

During this same time a little over one-half mile of sewer was laid for private parties and given to the city.

Cost to the city $553.55.

Cost to private parties $8,337.92.

Number of sewers, 5.

Length, 2,731.6 feet.

Cost to the city $20\frac{1}{4}$ cents per foot.

Cost to private parties $3.05 per foot.

These sewers were laid at proper depths and grades with branches and manholes, although ledge was encountered in four of them. In one case for a length of 799.8 feet the cost averaged $5.26 per foot. Under ordinary circumstances, the city pays 50 per cent. of the whole cost.

As you see above, for this one-half mile of sewer the city only paid $6\frac{1}{10}$ per cent. of the cost.

Sewers can be built cheaper before the erection of houses on the street, especially when ledge is encountered.

The most important work of the year has been the lowering of the sewers in Union street, from Fourth street to the west crosswalk of Sixth street, 16 feet deep; and in William street from Acushnet avenue to the west crosswalk of Pleasant street, 16 feet deep from Purchase to Pleasant street.

In both cases unexpected quantities of ledge were encountered retarding the progress of the work. The work was difficult and at times, dangerous, as the ledge laid in sheets at an angle of 20 degrees with the perpendicular, dipping to the north. The slipping of these sheets of rock at each explosion caused serious caving of the bank in places especially as the side most liable to these slippings carried the thin cement lined water pipe of the Water Works.

In one place on Union street, these slips extended to, and included, the curbing.

On William street, the travel was kept open at Purchase street by a short tunnel under the track of the Union street Railway.

What threatened to be a serious caving occurred at the corner of Pleasant street in 13 feet of earth digging, caused by a heavy storm, through the old sewer getting in behind the bracing.

The old sewers in both streets were a constant expense and menace. For this work, a Carson Excavator, as suggested in my last report, was hired to work with our hoisting engine, at a rental of $130 per month, with a privilege of the purchase of a new machine within two months.

If a new machine were purchased no rental was to be charged. I regret to record that no purchase was made and as a result 33% of the cost of the machine has been paid in rent.

The machine was a great help and convenience to the public. I would suggest not only the purchase of the new machine to accompany our hoisting engine, but that a second machine and engine would be a great benefit and of economy to the department in constructing.

During the year two new steam rock drills have been purchased, making a total of 8 drills.

I would suggest that as a result of two years use of these drills, the department should have at least four more drills and two portable boilers, so that drilling can be rushed by a large gang of drills, or that two gangs of drills on separate sewers can be at work.

During the past year the lack of steam power for drilling has caused expense and delay, notably Davis street sewer, now under process of completion.

At this date the large ledge on Davis street has six steam drills at work drilling holes 12 to 18 feet deep. The hoisting engine has been placed on a large platform over the trench, with a short arm derrick at the other end of the platform. A few men will do the blasting, clearing up trench, hoisting, etc., during the coming month.

This work should have been done in the good weather of the fall. I again protest against the ill advised attempts to build sewers in winter weather.

The money for Union and William street sewers was appropriated April 13th, but no work was authorized until June 16th,

when the hire of a Carson Excavator was decided upon. Work actually began July 5th, nearly three months after the appropriation was made; as a result we were caught in December on the William street and Pleasant street sewers, greatly increasing the cost of both.

I would renew my suggestion of last year:

"If the money were only available it would be a good idea to begin the systematic expenditure of a certain sum each year, say $10,000 to $20,000 for the lowering of sewers, to keep pace with the growing demand for this kind of improvement. It would also be a strong inducement for building, as the cost of drainage for a first-class building would cost no more than for a cheap, one story wooden building with little or no cellar space."

Catch Basins.—43 catch basins were built during the year, a much smaller number than was intended at the first of the season. This work should be carried out more fully the coming year.

Money expended on catch basins is not wasted.

If possible no catch basin should be expected to take the wash accumulated by over 400 feet of gutter from one direction. The accumulation of water in a gutter in heavy storms is somewhat of a surprise to many people. The velocity acquired in a gutter full of water on a sharp grade will occasionally carry a large part of the stream beyond the opening of the basin, causing a flooding of the next section of gutter before reaching the next basin.

PARKS AND SQUARES.

Very little has been done the past year.

The south driveway at Brooklawn and the circle in front of the house has been coated with screenings to make dry walking.

At Clarks Point part of the stone intended for the third

story of the fort, which has lain distributed over the property for some years, has been assembled in the construction of a sightly wall near high tide.

This wall has been built a length of 1915 feet. The old walls on the property have been removed to a large extent, to furnish rip rap and backing for the wall. This wall is considered a good piece of work by judges of such construction. I would suggest that it be continued the coming year.

The drain around the fort has been completed and graded with the broken stone and pebbles.

The fence across the point east of the old road has been removed, also the broken down piazza of the old dwelling.

The cannon are to be placed on their carriages within the proposed enclosure southeast of the fort.

I would suggest that no work be attempted beyond providing for present uses, until after the whole system of parks has been carefully studied and laid out with a due regard for the future. Present needs can be met the coming year in clearing up the old walls and foundations, and levelling the ditches of these walls, stoning up the present brooks where necessary, and such slight clearing up of underbrush as will render the grounds useful at present.

NEW BEDFORD AND FAIRHAVEN BRIDGE.

The widening of this bridge, a subject I have repeatedly called to your attention, took definite shape during the past year.

In the discussions that have been held over the projection of a new bridge, efforts have been made to hold the old location of the bridge and retain the grade crossing with the railroad track. I would suggest that you take part in this interesting work in case the old location is proposed and protest against the retaining of such a crossing. This crossing can be abolished. The present crossing, besides being very dangerous,

is a source of delay to travel, only equalled by the opening of the draw for the passage of vessels. The opening and closing of the draw would be necessary in any location the bridge might be placed.

It is a very dangerous place for the public, between the railroad tracks and the old draw, when both are closed to travel. The passage of steam tugs or vessels at one end of this short section, and locomotives and cars at the other, is a source of constant excitement to nervous horses.

This danger will increase with the increase in travel.

I would suggest that no work be done on the old bridge beyond keeping it in repair, until the question of the new bridge is settled.

New planking should be laid if the new bridge does not go through. I urge you to take part in the proceedings, as you will be burdened with the care and maintenance of the bridge when completed.

The following report of the draw tender for the year ending December 31, 1893, shows the number and kind of vessels for which the draw has been opened.

Month.	Boats.	Schooners.	Ships & Barks.	Tugs.	Barges.	Total.
1893.						
January,	1	13		38		52
February,	3	15		27	2	47
March,	11	33		63	11	118
April,	82	43		50	10	185
May,	142	39		58	28	267
June,	197	57		121	118	493
July,	302	77		71	62	512
August,	225	66		65	10	366
September,	182	83		77	2	344
October,	190	81		76	9	356
November,	37	50	1	44	10	142
December,	13	26	1	45	13	98
TOTAL,	1385	583	2	735	275	2980

CIVIL SERVICE.

New Bedford was one of the first cities, outside the city of Boston, to adopt civil service as applied to laborers. During this time of two and one-half years, the working of the system has fully demonstrated its usefulness.

I believe in it most heartily and it has certainly increased the efficiency of the working force of the department.

A number of tables are appended, as being of possible interest to many.

Respectfully submitted.

A. B. DRAKE,
Superintendent of Public Works.

Streets Accepted.

Streets.	Location.	Feet in Length.				
		10 ft. wide.	40 ft. wide.	50 ft. wide.	60 ft. wide.	80 ft. wide.
Beech,	Kempton to Maxfield,		1,009.36			
Bonney,	Rivet street to Cove road,			1,559.08		
Bowditch,	Nash road to Tarkiln Hill road,				5,739.00	
Bullard,	Acushnet avenue to Belleville avenue,			886.08		
Coffin avenue,	From 665 ft. east of Belleville ave. to the river,			885.00		
Cotter,	Cedar Grove to Coggeshall,		378.40			
Davis,	Acushnet avenue to Church street,			1,586.49		
Davis,	Belleville avenue to Acushnet river,			1,197.48		
Front,	South side of Holly street to Coffin avenue,			1,282.66		
Hillman,	Hunter street to Rockdale avenue,			786.14		
Maitland,	2.37 ft. east of Richmond st. to Shawmut ave.,		333.95			
North,	Hunter street to Rockdale avenue,			744.15		
North,	Newton to Florence,		1,247.58			
Nye,	Acushnet avenue to Belleville avenue,			876.39		
Rockdale avenue,	Cove road to Dartmouth street,					1,960.64
Salisbury,	Cove street south 657.20 feet,			657.20		
Sears Court,	Purchase to Pleasant,	228.50				
Shore,	Cove street south 424.30 feet,			424.30		
Social,	116 feet east of Harmony to McGurk,			44.00		
Stapleton,	Cove street to Cove road,			443.80		
Thompson,	Crapo to Bonney,		272.30			
Thompson,	Bonney to Dartmouth,			1,698.04		
		228.50	3,241.59	13,070.81	5,739.00	1,960.64

Total, 22 streets. Total length, 24,240.54 feet, or 4.591 miles.

Streets Widened.

Street.	Location.	Amount of Widening.	Former Width.	Present Width.
Middle Point road,	West French ave. to government park,	40 feet on west side from W. French ave. to west line of Warren street; thence to United States government property, 20 ft. on each side,	40	80
Nash road,	Acushnet ave. to Mt. Pleasant street,	5 feet on each side,	40	50
Rockdale avenue,	Allen to Kempton,	30 feet on west side,	50	80

Street Lines Re-established.

Mt. Pleasant, south line Coggeshall street to north line of Francis Pasell's property, 889.14 feet—40 feet wide.

Names of Accepted or Contemplated Streets Changed.

Beach street, Kempton to Maxfield, changed to Beech.
River street, Belleville to Acushnet avenue, changed to Bullard Street.

Macadam, New.

Street.	Location.	Length. Feet.	Width. Feet.	Area. Square Yds.	Stone. Tons.	Cost.
Acushnet ave.,	North of Lund's corner,	549.5	22	1,343.22	650	$1,154.09
"	North of Phillips road,	2,529.5	22.13	6,237.76	3,405	5,179.83
"	South of Phillips road,					
Ash.	Union to Arnold,	611.1	14	950.60	558	795.73
Austin,	Cottage to Cedar,	450.0	17.70			
		306.6	17			
		43.0	38	1,645.69	770	1,092.99
Cannon,	Water to Second,	349.0	16.5	639.83	235	403.58
Centre,	Front to Water,	235.6	14.1	369.11	133	217.34
Cottage.	Hillman to Parker,			3,674.99	1,487	2,150.08
Front,	Wamsutta to Logan,	985.9	18.11	2,366 53	1,497	1,773.11
Grinnell,	Second street to Acushnet avenue,	205.6	17			
		35.5	25.7	489.73	232	381.63
Kempton,	County to Summer,	289.7	18.7	601.93	286	443.85
Mt. Vernon,	East of Shawmut avenue,	22.5	18	45.00	25	31.95
North,	Summer to Chestnut,	207.5	18	415.00	152	231.74
Park Place,	West of Sixth,	315.2	14.3	500.82	190	248.71
Parker,	County to Summer,	506.0	16.86	947.91	457	675.20
Rockland,	Hemlock to Dartmouth,	464.6	17	877.58	462	691.07
Rotch ave.,	Hawthorn to Arnold,	186.5	25.5	544.37	60	108.05
Second,	Grinnell to Howland,	517.8	18.1			
		27.0	21.6	1,106.15	536	912.35
Wing,	Fourth to Fifth,	203.6	16.9	382.32	165	263.38
"	Fifth to Sixth,	187.5	17.3	360.42	174	289.13
		9,229.2		23,498.96	11,474	$17,043.81

Total cost of new macadam, ... $17,043.81.
Cost of new macadam, per square yard, . . $.725.
Cost of new macadam, per ton of stone, ... $1.485
Average tons of stone used, per square yard, ...488

Macadam Repaired.

Street.	Location.		Length. Feet.	Width. Feet.	Area. Square Yds.	Stone. Tons.	Cost.
Cottage,	Allen to Bedford,	Repairs.				16	$30.63
County,	Rivet to Thompson,	"	381	27.8	1,176.87	329	511.46
"	Thompson to Rockland,	"	375	27.8	1,158.33	244	385.89
"	Rockland to South,	"	475	26.4	1,392.28	375	576.22
"	Bedford to Russell,	"	314	23.3	812.91	212	357.45
"	Russell to Hawthorn,	"	198	23.6	519.2	190	265.73
"	Hawthorn to Madison,	"	382.5	23.6	1,003	238	356.03
"	William to Elm,	"	300	23.65	788.33	278	273.23
Fifth,	Walnut to School,	Rebuilt.	343	17.85	680.28	246	376.45
"	School to Spring,	"	230.4	16.8	430.08	172	311.56
Hawthorn,	Page to Tremont,	Repairs.	55	23.2	141.78	26	56.48
"	Rotch avenue to Reed,	Rebuilt.	196.4	23.1	504.09	180	283.31
High,	Second street to Acushnet ave.,	"	191.7	18.1	385.53	87	161.73
"	Acushnet ave. to Purchase,	"	205.7	24.1	550.82	101	164.57
Middle,	Second street to Acushnet ave.,	Repairs.	188.3	19.6	410.07	87	179.71
Pleasant,	Mill to North,	Rebuilt.	202	17.1	383.8	123	193.89
"	North to Hillman,	"	267.1	16.8	497.92	211	292.05
"	Hillman to Maxfield,	"	264.5	17	499.61	214	303.58
"	Pope to Franklin,	Repairs.	292	16.9	436.2	154	237.56
"	Hazard to Austin,	"				7	16.25
"	Austin to Linden,	Rebuilt.	363.1	17	685.85	268	511.07
Shawmut ave.,	Durfee to Grand,	"	1,089.9	17.9	2,167.68	1,033	1,539.02
Sixth,	Walnut to School,	"	341	17.76	672.08	290	451.47
Union,	County to Cottage,	"	700.8	17.3	1,346.52	212	322.00
"	Arch to Ash,	Repairs.	161.2	9.6	171.95	26	42.01
W. French ave.,	South of Cove street,	"				4	14.13
	Sundry small repairs,						1,162.16
			7,517.6		16,815.18	5,323	9,355.64

Paving, New.

Street.	Location.	Block.			Cobble.			Cost.
		Length. Feet.	Width. Feet.	Area. Sq. Yds.	Length. Feet.	Width. Feet.	Area. Sq. Yds.	
Acushnet ave.,	South side High to south side Campbell,	1,927.5	23.95	5,183.02				$11,384.89
"	" " " " " relaid,	70.3	2.60	20.31			191.79	
"	Willis to Pearl,	297.45	24.05	794.36				1,676.57
"	" " relaid.				17	10.5	19.38	
Bedford,	North side Sixth, west.	62.5	2.7	85.3				183.40
"	" " " "	29.5	15					
Franklin,	State to County,						1,233.51	545.81
"	" " relaid.					About	69.50	
Howland,	Prospect to Water,				517.0	17.72	1,018.19	633.08
*Potomska,	Water to Fourth,							43.09
Purchase,	Mill to North,			136.52				368.86
Sixth,	West side, between Bedford and Russell,			12.86				27.66
Summer,	Hillman to Maxfield.						348.14	223.98
"	" " relaid,					About	275.35	
"	Maxfield to Sycamore,				282.1	12.8	401.21	268.18
"	" " relaid.				311.6	7.75	268.37	
"	Sycamore to Smith,				246.6	12.9	353.46	260.02
"	" " relaid,				273.2	About 5.75	174.79	
"	Smith to Campbell,						386.09	272.61
"	" " relaid,						142.75	
"	Willis to Parker,						520.36	256.04
"	" " relaid,						316.05	
Weld,	Bowditch to Purchase,	220.7	22.2	577.65				1,234.99
William,	Second street to Acushnet avenue,	188.8	28.4	595.77				1,161.15
				7,405.79			5,718.94	$18,540.33

Total cost of block paving, about $16,037.52
Total cost of new cobble paving, about 2,290.90

Cost per yard of block paving, ... $2.165
Cost per yard of cobble paving, ...405

*Bill for paving stones. Work done in 1892.

Paving Repaired.

Street.	Location.		Block			Cobble.			Cost.
			Length. Feet.	Width. Feet.	Area. Sq. Yds.	Length. Feet.	Width. Feet.	Area. Sq. Yds.	
Austin,	Southwest corner Pleasant,	Sidewalk.							$5.80
Acushnet ave.,	Walnut to School,	Repairs.							58.13
"	School to Spring,	"							103.46
"	Union to William,	Relaid.				96	4.4	46.93	36.80
"	Maxfield to Pearl,	Repairs.							132.16
"	Pearl to Wamsutta,	Relaid.						1,135.97	661.36
"	Wamsutta to Logan,	Repairs.							370.68
"	Logan to Hicks,	"							47.29
"	Square at Lund's corner,	Relaid.				57	22	150.67	62.03
Ash,	Middle to Kempton,	"				5.3	4.2	} 304.12	116.43
"	" "	"				308.5	8.8		
Bethel,	William to Elm,	Repairs.							19.92
Bridge,*	East of draw,	"	39	8.3	35.97				} *
"	West of draw,	"						238.09	
Coffin,	East of Water,	"							9.12
Elm,	Water to Acushnet ave.,	Relaid.				198	18	396	91.61
"	Purchase to Pleasant,	"						637	136.09
"	Sixth to Eighth,	"				300	2	66.67	17.86
Fourth,	School to Union,	Repairs.				561.5	3	187.16	27.28
Front,	Walnut to Union,	"							110.81
"	Wamsutta to Logan,	Relaid.				75.2	23.97	} 256.94	
"	" "	"				68.8	6.15		
"	" "	New.				43.4	2		36.03
Hillman,	Water to Second,	Relaid.				254.6	25.2	731.64	224.16
"	Second to Acushnet ave.,	"				204	20.1	450.6	130.95
"	North side County to Summer,	"	52.7	17.55	102.75	70	2.5	19.4	308.17
Kempton,	Cottage to Cedar,	Repairs.							7.12

Middle,	Water to Second,	Relaid.				327	9.5	350.8	98.68
North,	Second to Acushnet ave.,	"						590.96	131.04
Pleasant,	Square at North,	"				24.62	8	118.71	52.06
"	" "	"				30.05	29		
"	" Hillman,	"				25.35	8	118.24	51.30
"	" "	"				29.40	29.30		
"	" Maxfield,	"				29.8	28.75	117.74	47.22
"	" "	"				24.62	8		
Pope,	State to County,	"				443.2	24.26	1,236.03	494.34
Purchase,	North of William,	Repairs.							53.66
"	Hillman to Clark,	"					About		743.55
Rivet,	Square at First,	Relaid.				69.5	6.89	53.23	25.14
"	Square at Second,	Repairs.				36.0	6.80	27.2	15.77
Second,	William to Elm,	"						829.55	252.76
Sixth,	East side Union to Market,	"							6.11
Summer,	Kempton to Mill,	Relaid.				191.4	7.05	362.62	175.91
"	Mill to North,	Repairs.				251	18.55	517.45	195.87
"	North to Hillman,	"				293.6	About 17.42	568.33	249.79
"	" "	New.				52.9	19.74	116.03	
"	Campbell to Willis,	Repairs.						288.57	269.11
"	" "	New.						234.69	
Union,	Square at Purchase,	Repairs.			41.11			43.66	53.23
Walnut,	East of Water,	"							28.18
Water,	Cove to Highway,	"							1,670.45
William,	Second street to Acushnet ave.,	"							11.33
	Sundry small repairs,								213.57
					179.83			10,195.02	$7,557.33

* Cost under New Bedford and Fairhaven Bridge.

Streets Filled and Graded.

Street.	Location.	Cost.
Acushnet ave.,	Between Rivet and Potomska,	$79.08
" "	North of Lund's corner,	20.00
" "	Between Davis' corner and Phillips road,	376.49
Armour,	" Union and Court,	30.71
Arnold,	" Tremont street and Rotch avenue,	24.97
Ash,	" North and Hillman,	40.31
Austin,	" Ashland and Cedar,	162.22
Babbitt,	West of Dartmouth,	18.89
Bay,	Between Borden and Columbia,	193.71
Belleville ave.,	South of Coggeshall,	275.54
" "	North of "	911.36
" "	" Davis,	41.33
" "	" Howard avenue,	68.76
Blackmer,	East of Water,	281.89
Bonney,	Between Rivet and Thompson,	6.27
Bowditch,	" Weld and Cedar Grove,	97.79
"	North of Cedar Grove,	7.49
Campbell,	Between Shawmut avenue and Park street,	3.67
Cedar Grove,	" Purchase and County,	19.30
" "	West of County,	126.92
Chancery,	Between Sycamore and Smith,	8.28
Cherry,	" Sixth and County,	25.29
Chestnut,	North of Parker,	131.07
Coggeshall,	West of County,	93.33
Columbia,	Between Clay and Allen,	87.33
Cottage,	North of Parker,	17.94
Cotter,	South of Coggeshall,	24.81
County,	" Cove street,	76.74
"	Between Linden and Cedar Grove,	73.46
Church,	" Coffin avenue and Nash road,	383.13
"	North of Nash road,	250.62
Clark,	Between Purchase and County,	56.44
"	" County and Reynolds,	15.42
Clay,	" Ward and Columbia,	45.85
Coffin ave.,	East of Belleville avenue,	1,715.27
Coffin,	" Acushnet avenue,	16.00
Cove road,	West of West French avenue,	468.41
" "	Foot of Crapo,	56.12
Cove,	East of Water,	9.61
Davis,	Between Belleville and Acushnet avenues,	690.70
"	West of Acushnet avenue,	271.73
Deane,	Between Acushnet avenue and Bowditch st.,	318.81
Division,	" County and Crapo,	5 85
Field,	" Stowell and Babbitt,	22.71
French ave.,	South of Cove street,	201.77
Front,	Between Blackmer and Rivet,	98.47
"	" Grinnell and Howland,	410.46
"	North of Cedar Grove,	29.33
"	Between Wamsutta and Logan,	245.10
Gifford,	East of Water,	434.86

STREETS FILLED AND GRADED.—*Continued.*

STREET.	LOCATION.	COST.
Grand,	West of Shawmut avenue,	12.66
Grape,	Between Oak and Rural,	1,106.23
"	" Rural and Rockdale avenue,	9.40
Grinnell,	East of Prospect,	129 84
Hall,	Between Rivet and Thompson,	117.31
Harbor,	" Cove and Gifford,	968.13
Hathaway road,	West of Mt. Pleasant,	104.61
Hemlock,	South of Rockland,	1,133.68
Hicks,	East of Acushnet avenue,	115.46
Hillman,	West of Park,	1,095.06
Holly,	Between Acushnet avenue and Bowditch,	7.08
"	" Bowditch and Brook,	543.54
Homer,	North of Parker,	270.17
Howard ave.,	Between River road and Belleville avenue,	105.08
Howland,	Between Prospect and First,	22.94
Hunter,	" Hillman and Maxfield,	55.10
Hyacinth,	" Rivet and Thompson,	5.69
Independent,	West of County,	90.38
Kempton,	" Rockdale avenue,	35.20
King's Hi'way,	Between Tarkiln Hill road and Mt Pleasant,	18.98
Linden court,	South of Linden,	13.98
Lombard,	South of Rockland,	75.35
Maple,	West of Ash,	413.84
Maxfield,	West of Park,	260.79
Merrimac,	East of Acushnet avenue,	1,225.69
Middle Point rd.		61.72
Middle,	East of Water,	45.00
Mill road,	Between Main road and Davis' corner,	35.56
Mill,	" Florence and Hunter,	39.73
Mt. Pleasant,	" Hathaway and Plainville road,	42.06
Myrtle,	North of Weld,	16.23
"	Between Clark and Cedar Grove,	24.76
Nash road,	East of O. C. R. R.	16.30
" "	Between Acushnet avenue and Mt. Pleasant,	24.63
Nelson,	West of County,	12.26
Newton,	South of Hillman,	227.94
North Front,	Between Hicks and Cedar Grove,	12.57
" "	North of Sawyer,	161.75
North,	Between Chancery and Park,	3.06
Oak,	" Harrison and Grape,	37.50
Orchard,	South of Rivet,	3,898.44
Page,	North of Grape,	5.98
Palmer,	Between Court and Kempton,	180.34
Park,	" Arnold and Union,	5.84
"	" Smith and Parker,	175.37
Phillips road,	" Acushnet ave. and Braleyville rd.,	208.25
Plainville road,	" Acushnet station and Turner's Mill,	45.29
Pleasant,	" Union and William,	97.37
Pope,	East of Acushnet avenue,	347.01
Rivet,	East of Water,	24.92

STREETS FILLED AND GRADED.—*Concluded.*

STREETS.	LOCATION.	COST.
Rockdale ave.,	East of Dartmouth street,	$220.92
Rockland,	Between Hemlock and Dartmouth,	50.90
Rotch ave.,	" Hawthorn and Arnold,	351.03
Rounds,	" Court and Kempton,	27.18
Salisbury,	South of Cove,	58.25
Sawyer,	East of Purchase,	58.36
Scott,	West of County,	442.87
Sears court,	Between Purchase and Pleasant,	13.88
Second,	" Fourth and Division,	292.99
Shawmut ave.,	" Willis and Parker,	26.58
" "	North of Hathaway road,	60.02
" "	" Fall River Railroad,	46.68
Shore,	South of Cove road,	205.57
Spooner,	Between Lombard and Dartmouth,	40.28
State,	North of Pope,	6.08
"	Between Franklin and Merrimac,	12.74
"	" Linden and Clark,	101.75
Stone,	South of Allen,	103.64
Sycamore,	East of Park,	9.22
Tarkiln Hill rd.,	Between Acushnet avenue and Mt. Pleasant,	109.13
Thompson,	" County and Crapo,	58.66
Union,	" Ash and Park,	156.62
"	" Park and Tremont,	6.11
Weaver,	West of Dartmouth,	686.75
Weld,	West of County,	20.10
West Maxfield,	East of Rockdale avenue,	466.93
Willis,	Between Shawmut avenue and Park street,	5.01
Wilson,	" Austin and Durfee,	139.22
Winsor,	" County and Crapo,	29.19
		$26,564.34

Crosswalks, New.

Street.	Location.	Stone. Lines.	Stone. Length. Feet.	Stone. Width. Inches.	Concrete. Length. Feet.	Concrete. Width. Feet.	Concrete. Area. Yards.	Cost.
Hawthorn,	North side, across County,				32.1	8	28.53	$19.73
Howland,	" " " Acushnet avenue,				23.5	9.6	25.07	14.98
Kempton,	South " bet. Acushnet av. & Purchase,	Single. Old stone.	21.3	18				6.22
Linden,	North " across Reynolds,				39.5	7.6	33.35	23.70
Parker,	South " between County and Summer,	Double. Old stone.	49	24				42.69
Pleasant,	East " across High,				23.35	9.2	23.87	16.72
Rockland,	South " " County,				33.5	7.3	27.17	18.28
Russell,	" " " "				31	7.4	25.49	18.31
Sixth,	West " " Wing,				25.1	8.03	22.39	9.10
Summer,	Square at Campbell:							
	North side, across Summer,	Double. Old stone.	43.8	18				
	South " " "	Double. Old stone.	45.1	18				
	East " " Campbell,	Double. Old stone.	47.5	18				55.58
Union,	South " " Park,				26	8	23.11	29.78
			206.7		234.05		208.98	$255.09

Crosswalks, Repaired.

Street.	Location.		Stone.			Concrete.			Cost.
			Lines.	Length. Feet.	Width. Inches.	Length. Feet.	Width. Feet.	Area. Yards.	
Acushnet ave.,	East side, across Rivet,	Relaid.	Double.	13	18				
"	West " " "	New stone.	"	16	18				$17.77
"	East " " William,	New stone.	Triple.	84.6	24				82.55
"	" " " High,	Relaid.	Double.	41.6	18				8.50
"	Square at Kempton, viz.:								
	Kempton north side across ave.,	Relaid.	"	48.6	24				
	Acushnet ave., east side across Kempton,	"	"	33.8	18				
	" west " " "	"	"	34.6	18				21.87
Acushnet ave.,	West side, across Mill,	"	"	46.4	18				8.90
"	" " " North,	Repairs.							3.20
"	Square at North, viz.:								
	North side, across Avenue,	Relaid.							
		New stone.	Double.	45.6	24				
	South " " "	Relaid.							
		New stone.	"	46.3	24				
Acushnet ave.,	East " " North,	Relaid.	"	45	18				89.53
"	West " " Hillman,	"	"	45.5	18				6.00
"	" " between Hillman and Maxfield,	"	"	22.6	18				3.04
"	East " " Weld and Pope,	"	"	51	18				6.37
"	West " across Tarkiln Hill road,	"	"	72	18				13.86
Cedar Grove,	East " " Acushnet avenue,	Repairs.				27.5	9.8	29.94	12.95
County,	West " " Madison,					19	8.5	17.64	18.21
"	" " between Hillman and Maxfield,	Relaid.							
		New stone.	Double.	45.2					43.79
"	East " across Pope,	Relaid.							
		New stone.	"	6.1	18				18.00
"	" " " "	Relaid.	"	37.6					

County,	East side across Franklin,	Relaid.	Double.	47.5	18				22.23
Cove,	North " between Harbor and Water,	"	"	75.6	18				24.08
Eighth,	West " across William,					31	8.2	28.24	17.89
Elm,	South " between Purchase and Pleasant,	"	"	120.00	18				6.98
Franklin,	Square at State viz.:								
	State, west side,	"	"	46.8	18				
	" east side,	"	"	45.4	18				63.14
	Franklin, south side,	"	"	48.6	18				
	" north side,	"	"	48.6	18				
Grinnell,	Square at Second, viz.:								
	Second, east side,	"	"	47.2	18				
	Grinnell, north side,	"	"	47.9	18				18.82
Hawthorn,	North side, between Chancery and Tremont,	"	"	38	18				8.87
Hillman,	North " " County and Summer,	Relaid.							
		New stone.	"	116.6	24				112.97
Howland,	" " across Front,	Relaid.	"	51.8	18				5.50
	South " " "	"	"	48.4	18				8.42
Madison,	" " " Water,	"	Single.	21.3					
"	North " " "	"	"	21.2	24				41.21
Maxfield,	South " " Foster,	"	Double.	45.4	18				40.22
Mill,	Square at Summer viz.:								
	Summer, east side,	"	"	47.3	18				
	Mill, north side,	"	"	42.1	18				
	Mill, south side,	"	"	46.1	18				44.12
Mill,	North side, across Ash,	"	Single.	33.2	18				5.44
Parker,	South " " Summer,	"	Double.	44	18				12.04
Pearl,	" " " Acushnet avenue,	"							
		New stone.	Triple.	79.5	24				74.59
Pleasant,	Square at North:								
	North side, across Pleasant,	Relaid.	Double.	46.3	18				
	South " " "	"	"	45.1	18				
	East " " North,	"	"	46.5	18				
	West " " "	"	"	45.1	18				84.60

CROSSWALKS, REPAIRED.—*Concluded.*

STREET.	LOCATION.		STONE.			CONCRETE.			COST.
			LINES.	Length. Feet.	Width. Inches.	Length. Feet.	Width. Feet.	Area. Yards.	
Pleasant,	Square at Hillman :								
	North side, across Pleasant,	Relaid.	Double.	46.2	18				
	South " " "	"	"	46.1	18				
	East " " Hillman,	"	"	45.2	18				
	West " " "	"	"	45.3	18				$31.46
Pleasant,	Square at Maxfield :								
	North side, across Pleasant,	"	"	43.4	18				
Pleasant,	South " " "	"	"	45.4	18				
	East " " Maxfield,	"	"	46.1	18				
	West " " "	"	"	44.7	18				38.30
Purchase,	West side, across Elm,	"	"	45	18				6.99
School,	North side, between Sixth and Seventh,	"	"	16.5	18				11.41
Second,	West " across William,	"	New stone.	Triple.	86.8	24			85.88
Sixth,	" " between Bedford and Russell,	Relaid.	Double.	21.9	18				5.34
South,	North " across County,	Repairs.				33	8.1	29.70	12.61
State,	East " " Pope,	Relaid.	"	43.1	18				19.53
Summer,	Square at North :								
	North side, across Summer,	"	"	45	18				
	South " " "	"	"	45.6	18				
	East " " North,	"	"	47.2	18				
	West " " "	"	"	43.4	18				58.15
Summer,	Square at Hillman :								
	North side, across Summer,	"	"	45.8	18				
	South " " "	"	"	46.3	18				
	West " " Hillman,	"	"	47.4	18				
	East " " "	"	"	47.5	18				73.83

Summer,	Square at Maxfield :							
	North side, across Summer,	Relaid.	Double.	46.3	18			
	South " " "	"	"	44.6	18			
	West " " Maxfield	"	"	43.2	18			
	East " " "	"	"	46.5	18			77.39
Summer,	" " between Sycamore and Smith,	"	"	20.2	18			2.28
"	Square at Smith :							
	North side, across Summer,	"	"	46.1	18			
Summer,	South " " "	"	"	45.5	18			
	East " " Smith,	"	"	46.5	18			
	West " " "	"	"	46.5	18			75.71
Summer,	East " between Smith and Campbell.	"	"	28	18			4.18
"	West " across Campbell,	"	"	47.4	18			8.33
"	East " " Parker,	"	"	45.6	18			11.37
"	West " " "	"	"	43.2	18			11.84
"	East " " Willis,	"	"	45.9	18			6.50
"	West " " "	"	"	46.5	18			4.50
Sycamore,	South " " Summer,	"	"	44.4	18			4.00
Tarkiln Hill rd.,	North " " Acushnet avenue,	"	"	69				16.34
Water,	West " " Division,	"	Triple.	67.4	18			24.77
Weld,	North " " Ashland,	Cinders.						2.21
Willis,	" " " Acushnet avenue,	Relaid.						
"		New stone.	Triple.	87.5	24			83.69
"	" " " Summer,	Relaid.	Double.	44.3	18			2.50
	South " " "	"	"	46.1	18			4.50
	Sundry small repairs,							27.05
				4,025.6		110.5		105.52	$1,656.32

Gutters, New.

Street.	Location.	Length. Feet.	Width. Feet.	Area. Sq. Yds.	Cost.
Acushnet ave.,	East side, Lund's Corner, north,	557	4	247.56	
"	West " " " "	541.9	4	240.84	$309.14
"	Both sides, Phillips road, north,				
"	" " " " " south,	5,499.4	4	2,443.4	
				40.6	1,542.06
				49.8	
Allen,	South side, Borden to Ward, (with Driveways relaid 14x3.5)	185.6	3.5	72.13	29.87
Austin,	South side, Ashland to Cottage,	343.4	4	141.51	90.47
"	South side, Cottage to Cedar,	460	4	204.44	102.10
Chestnut,	North side, Pope to Locust,	502.9	4	223.51	301.10
"	South side, Pope to Locust,	468.3	4	207.03	
Cottage,	West side, Hillman to Maxfield,	262	3.5	112.58	50.61
"	" " " "	48.1	2		
"	West side, Maxfield to Sycamore,	293.3	3.5	114.06	27.94
"	East side, Maxfield to Sycamore,	279.6	3.5	108.73	69.91
"	West side, Sycamore to Smith,	255.5	3.5	99.6	47.45
"	East side, Willis to Parker,	297.3	3.5	115.62	63.83
"	West side, Willis to Parker,	288.2	3.5	112.08	62.91
Rockland,	North side, Hemlock to Dartmouth,	458.6	4	203.82	237.14
"	South side, Hemlock to Dartmouth,	432.2	3.5	168.08	
Rotch avenue,	West side, Hawthorn street, north,	315.4	4		
"	" " " " "	21	3.5	149.45	99.64
"	" " " " "	50	2		
		11,559.7		5,054.84	$3,034.17

Total length,	11,559.7 feet.	Total cost, including 5.44 sq. yds. relaid,	$3,034.17
Average width,	3.93 feet.	Cost per square yard,	.60
		Cost per foot length and average width,	.262

Gutters, Repaired.

Street.	Location.		Length. Feet.	Width. Feet.	Area. Sq. Yds.	Cost.
Acushnet ave.,	West side, Weld to Cedar Grove,	Relaid.	216.5	3	72.17	$21.49
Ash,	East side, Hawthorn to Maple,	"	327	3.5	127.2	26.29
"	West side, Maple to Clinton,	"	186	3	62	21.77
"	" " Clinton to Arnold,	"	147.5	3	49.17	37.35
"	East " " "	"	148.3	3	49.43	
"	East " Arnold to Union,	"	611	3.5	237.61	111.40
"	West " " "	"	611	3.5	237.69	
Austin,	North side, Ashland to Cottage,	"	307	3.5	119.39	47.75
"	" " Cottage to Cedar,	"	449	3.5	172.28	51.68
Campbell,	" " County to Summer,	"	100	3.5	38.89	10.02
"	" " Summer to Chestnut,	"	64.5	3.5	25.08	7.68
"	South " " "	"	60	4	26.67	9.48
Cottage,	East " Hillman to Maxfield,	"	273.5	3.5	106.36	20.80
"	" " Sycamore to Smith,	"	205	3.5	90.42	32.29
"	" " Smith to Campbell,	"	11.5	2	2.55	43.53
"	" " " "	"	85	3.5	33.06	
"	" " " "	New.	143.6	4	63.5	
"	West " " "	Relaid.	244.2	3.5	98.07	20.63
County,	East side Bedford to Russell,	"	310.3	3	103.43	25.46
"	West " " "	"	285.5	3	95.17	32.02
"	" " Russell to Hawthorn,	"	200	3	66.67	20.67
"	East " Franklin to Merrimac,	"	100	3	33.33	4.18
Durfee,	North " Shawmut avenue east,	"	140.6	3	46.87	12.96
Fifth,	West " Walnut to School,	"	343	3	114.33	52.72
"	East " " "	"	343	3	114.33	
Foster,	East " High to Kempton,	"	87.1	3.5	33.87	7.13
Front,	West side Wamsutta to Logan,	"	556.3	3.5	216.37	92.51
"	" " " "	New.	358.6	3.5	139.46	

GUTTERS, REPAIRED.—*Concluded.*

STREET.	LOCATION.		Length. Feet.	Width. Feet.	Area. Sq. Yds.	COST.
Grinnell,	South side, Second street to Acushnet ave.,	Relaid.	213.5	3.5	83.03	$45.95
"	North side, " " "	"	207.5	3.5	80.69	
"	South side, Crapo to Bonney,	"	250.2	3.5	97.3	26.34
Grove,	North side, Cottage to Ash,	"	19	3	6.33	11.12
Hawthorn,	Both sides, County to Ash,	Rep'd.				25.32
"	North side, Chancery to Tremont,	Relaid.	55	3.5	21.17	7.53
"	" side, Tremont to Rotch avenue,	"	48	3.5	18.57	7.06
"	" side, Rotch avenue, west,	"	108.3	3.5	42.12	15.83
High,	" side, Pleasant to Foster,	"	172	3.5	66.89	12.02
Kempton,	South side, " "	"	173	3.5	67.28	16.92
Morgan,	South side, Cottage to Cedar,	"	137.6	3.5	53.51	9.66
Mt. Vernon,	North side, Shawmut avenue, east,	"	57.4	3	19.13	5.29
North,	" side, Pleasant to Foster,	"	42	3.5	16.33	15.26
"	South side, " "	"	48.5	3.5	18.86	
"	" side, Summer to Chestnut,	"	206.7	3.5	80.38	43.25
"	North side, " "	"	203.7	3.5	81.82	
Parker,	" side, County to Summer,	"	13.1	2	200.07	49.59
"	" side, " "	"	507	3.5		
"	South side, " "	"	30	7.6		
"	" " " "	"	476	3.5	217.04	76.81
"	" " " "	"	11.4	3		
"	" " " "	"	12.6	2		
Park Place,	" side, Sixth, west,	"	318.7	3.5	247.88	101.27
"	North side, " "	"	318.7	3.5		
Pleasant,	East side, Union to William,	"	230	3.5	89.44	40.31
"	West side, " "	"	14	3.5	5.44	2.76
"	West side, William to Elm,	"	70	3.5	27.22	13.64
"	East side, Mill to North,	"	206.9	3.5	80.46	24.55
"	West side, Mill to North,	"	216.9	3.5	84.35	18.76
"	" " Hillman to Maxfield,	"	272.5	3.5	105.97	58.66
"	East side " "	"	265.5	3.5	103.25	

Pleasant	East side, North to Hillman	Relaid.	277.8	3.5	108.03	}	49.02
"	West side, " "	"	269.8	3.5	104.92	}	
School,	North side, Seventh to County,	"	83.6	3.5	31.40		7.90
Second,	East side, Grinnell to Howland,	"	517.8	3	172.6	}	77.51
"	West side, " "	"	517.8	3	172.6	}	
"	East side, North to Hillman,	"	266.7	3	88.9		19.81
Shawmut ave.,	West side, Durfee to Grand,	"	385.4	3			
"	" " " "	"	580.2	3.5			
"	" " " "	New.	26.5	1.5	768.67		218.56
"	East side, " "	Relaid.	73.4	2			
"	" " " "	"	56.7	3			
Sixth,	West side, Bedford to Russell,	"	68.6	3	22.87		4.70
"	" " Walnut to School,	"	340.8	3	112.49		35.68
"	East side, " "	"	341	3	112.56		28.17
Tarkiln Hill rd.,	South side, Acushnet ave., west,	"	70.6	3.5	27.46	}	17.67
"	North side, " "	"	51.4	3.5	19.99	}	
Union,	North side, Orchard to Cottage,	"	338.4	3.5	131.60		37.47
Walden,	East side, Maxfield to Sycamore,	"	54.2	3	18.07		10.30
Willis,	South side, Summer to Chestnut,	"	123.5	3.5	48.03	}	17.37
"	North side, " "	"	34.5	3.5	13.42	}	
Wing,	North side, Fourth to Fifth,	"	203.6	3.5	79.18	}	35.32
"	South side, " "	"	198.5	3.5	77.19	}	
"	South side, Fifth to Sixth,	"	209.7	3.5	81.55	}	37.77
"	North side, " "	"	199.8	3.5	77.70	}	
	Sundry small repairs,						43.90
			17,111.0		6,759.13		1,978.86

CURBING.

Street.	Location.	New, With New Stone.	Relaid.		Cost.
			With New Stone.	With Old Stone.	
Acushnet ave.,	Both sides, between High and Mill,		7	488.4	$54.11
"	East side, between Mill and North,			232.2	43.84
"	West side, " " " "			227.7	
"	East side, between North and Hillman,			267.5	35.98
"	West side, " " " "			269.1	
"	" " Hillman and Maxfield,		4.3	264.6	31.50
"	East side, " Maxfield and Campbell,	78.6		213.4	61.70
"	West side, " " " "			176	24.33
"	" " Weld and Cedar Grove,			212.5	24.28
"	East side, " Washburn & "	82.6			55.04
Allen,	South side, " Borden and Ward,	171.6		2.1	114.59
Ash,	Both sides, " Kempton and Middle,			312.2	33.42
Austin,	North side, " Cottage and Ashland,	14			8.62
"	Southeast corner Cottage,	12.9			9.27
Belleville ave.,*	East side, between Sawyer st. & Coffin ave.,				45.11
Bethel,	West side, " William and Elm,	182.4			120.02
Blackmer,	South side, " Front and Water,	64.9			47.05
Bowditch,	East side, " Weld and Cedar Grove,	660.1			575.20
"	West side, " " " " "	223.5			
Campbell,	North side, " County and Summer,	98.6			60.46
"	" " Summer and Chestnut,			62.1	6.90
Cedar Grove,	South side, " Acush. av. & Bowditch st.			26.1	8.87
Chestnut,	Southeast corner Pope,	12			6.99
"	Northeast " "	7.5			5.42
Cottage,	East side, between Maxfield and Sycamore,	272.6			172.71
"	" " Sycamore and Smith,	129.0		66.1	85.11
"	West side, " Willis and Parker,	307.4			180.22

Cottage,	East side, between Willis and Parker,	295.3		4.3	192.30
"	Southwest corner Austin,	12.3			8.79
County,	West side, between Allen and Bedford,		66.6		54.15
Cove,	North side, " Harbor and Water,	242		537.5	228.87
Delano,	" " Front and Water,		90.4		62.19
Elm,	Both sides, " Purchase and Pleasant,			90.0	10.10
Foster,	East side, " High and Kempton,		97.3		55.82
"	East side Maxfield, south,			16.0	7.57
Front,	West side, between Potomska and South,	637.8			405.48
"	" " Wamsutta and Logan,	358.6		497.7	275.08
Grinnell,	South side, " Second and Acush. av.,		191.5		185.06
"	" " Crapo and Bonney,	236.7			163.83
Hawthorn,	" " Cottage and Ash,	85.7			59.96
"	North side Rotch avenue, west,	105.8			75.65
High,	North side, between Pleasant and Foster,		176.0		119.56
Howland,	" " Prospect and Front,	12.5		325.8	53.47
"	South side, " Front and Water,	355.8			235.86
Kempton,	" " Pleasant and Foster,		168.6		115.66
Kilburn,*	" Front, east,				68.74
Maxfield,	" between Purchase and Pleasant,			20.8	4.00
"	North side, " Chestnut and Cottage,			53.0	3.00
Mechanics lane,	" " Sixth and Eighth,			39.67	14.71
Morgan,	South side, " Cottage and Cedar,	130.3			84.64
North,	North side, " Pleasant and Foster,		47.6	15.90	41.81
"	South side, " " " "		51.4		34.18
"	North side, " Summer and Chestnut,			196.70	20.66
Parker,	South side, " County and Summer,	335.7		106.5	234.71
"	North side, " " " "			493.5	41.36
Pleasant,	East side, " Union and William,		218.3		171.54
"	" " Mill and North,		218.5		142.57
"	West side, " North and Hillman,		452.2	25.0	330.10
"	East side, " Hillman and Maxfield,		513.0	50.0	381.81
Pope,	North side, " Oak and County,			102	20.00
Rockland,	South side, " Crapo and Bonney,	246.5			148.13
"	" " Hemlock and Lombard,	479.3			299.01

CURBING.—*Continued.*

Street.	Location.	New, With New Stone.	Relaid.		Cost.
			With New Stone.	With Old Stone.	
Rotch avenue,	West side Hawthorn, north,	18.3			$14.69
School,	North side, between Seventh and County,			45	6.89
Second,	West side, " Potomska and South,	249			157.98
"	" " South and Grinnell,	396.2		7.3	259.31
"	East side, " North and Hillman,			278	31.70
Shawmut ave.,	West side, " Durfee and Mt. Vernon,	38.6			31.14
"	East side, " Mt. Vernon and Grand,	16.2			9.78
"	West side, " " " "	107.9			67.17
Sixth.	" " Bedford and Russell,			57	8.00
"	East side, " Union and Market,	52.2			36.02
Smith.	South side, " Walden and County,	44.8			31.65
"	North side, " Chestnut and Cottage,			23	7.14
"	South side, " " " "			19	
Spring,	" " Seventh and County,		15.5		10.42
State.	West side, " Linden and Weld,	488.7			321.99
Summer,	" " Kempton and Mill,			154.1	20.23
"	East side, " " " "			170.0	16.70
"	West side, " Mill and North,			183.2	23.57
"	" " North and Hillman,			269.6	41.84
"	East side, " " " "	63.2		78.4	52.14
"	West side, " Hillman and Maxfield,			256.1	32.67
"	East side, " " " "	117.1		136.6	87.51
"	West side, " Maxfield and Sycamore,		7.8	288.1	37.29
"	East side, " " " "			301.6	27.00
"	" " Sycamore and Smith,			242.4	29.06
"	West side, " " " "	211			129.33
"	East side, " Smith and Campbell,	195.8			129.98

Summer,	West side, between Smith and Campbell,			200.0	26.48
"	East side, " Campbell and Willis,	200.2		25	125.30
"	West side, " " " "			220.7	35.55
"	" " Willis and Parker,			309.3	41.97
"	East side, " " " "		298.8		170.12
Tarkiln Hill road,	Northwest cor. Acushnet avenue,	13		12.1	11.34
Union,	North side, between Ash and Chancery,	220.4			155.59
"	South side, " Ash and Emerson,	364.2		48.1	248.84
Washington,	North side, " Orchard and Sears,		35.4		21.03
Water,	East side, " Delano and Blackmer,		66.1		44.59
"	" " " " "	47			34.07
"	West side, " Grinnell and South,			16.6	10.84
Weld,	Northeast corner of Bowditch,	12.5		63.7	29.95
"	North side, between Bowditch and Purchase,	25		182.8	77.53
William,	South side, " Purchase and Pleasant,	15.3			8.20
Willis,	" " County and Summer,	242.5		12.5	154.86
"	North side, " Summer and Chestnut,			32.5	3.00
"	South side, " " " "	85		36.2	56.08
Wing,	South side, " Fourth and Sixth,		378.9		253.34
	Sundry small repairs,				114.94
		9,076.1	3,105.2	9,063.27	$9,405.93

*To be completed in 1894.

Total cost,	$9,405.93	Cost per foot of new curbing,	$0.65
Total cost of relaying, repairs, etc., about	3,499.13	Cost per foot of stone,	.48
Total cost of new work, about	5,906.80	Cost per foot for labor,	.17

Concrete, New.

Street.	Location.	Area Square Yards.	Cost.
		43.72	
Acushnet ave.,	East side, between Washburn and Cedar Grove,	34.99	$52.50
"	East side, between Washburn and Cedar Grove, rebuilt,	291.34	160.09
"	West side, between Weld and Cedar Grove,	80.90	47.40
"	East side, between Hicks and Washburn,	86.50	37.28
"	East side, between Delano and Blackmer,	33.82	16.75
Bedford,	North side, between Sixth and County,	277.85	142.51
Blackmer,	South side, between Second street and Acushnet ave.,	4.39	32.48
"	South side, between Second st. and Acushnet ave., top coat.	60.17	142.03
"	South side, between Front and Water,	280.47	64.42
"	South side, between Water and Second,	110.68	90.93
Campbell,	North side, between County and Summer,	172.71	54.84
Cedar Grove,	South side, between Front street and Acushnet ave.,	101.84	71.03
County,	West side, between Hillman and Maxfield,	175.23	16.85
"	West side, between Winsor and Katharine,	16.85	40.09
Court,	South side, between Cottage and Ash,	87.12	49.49
Delano,	North side, between Front and Water	114.83	54.14
"	North side, between Water and First,	125.61	69.36
"	North side, between First and Second,	160.93	33.73
"	North side, between Second street and Acushnet ave.,	78.26	9.33
"	North side, between Acushnet ave. and County street.	9.39	21.46
Elm,	North side Purchase, east,	42.32	32.68
First,	West side, between Delano and Blackmer,	74.99	59.90
Foster,	East side, between High and Kempton,	137.59	
High,	North side, between Pleasant and Foster,	246.96	132.92
Hillman,	North side, between County and Summer, No. 5 Engine House yard,	64.59	26.09
Katharine,	South side, between County and Crapo,	162.99	70.96
Kempton,	South side, between Pleasant and Foster,		

Linden,	North side, between Pleasant and State,	34.54	15.16
Locust,	North side, between County and Chestnut,	235.11	108.13
"	North side, between Chestnut and Cedar,	377.35	166.07
Morgan,	South side Cedar, east,	97.29	47.47
"	South side Cedar, east, top coat,	4.84	
Pleasant,	Southeast corner Maxfield,	14.58	9.35
"	South side Acushnet ave., west,	17.46	9.59
"	West side, between North and Hillman,	6.53	6.17
"	West side, between Pearl and Pope,	248.67	126.53
Second,	East side, between Delano and Blackmer,	27.38	13.88
Smith,	South side, between Walden and County,	65.57	26.20
Summer,	West side, between Maxfield and Sycamore,	30.85	14.25
"	East side, between Sycamore and Smith,	142.65	64.45
"	East side, between Sycamore and Smith, top coat,	5.38	
"	East side, between Smith and Campbell,	157.59	66.64
Union,	South side, between Ash and Chancery,	196.92	74.39
"	North side, between Ash and Chancery,	44.27	22.64
"	North side, between Chancery and Park,	83.82	34.14
Walden,	West side, between Sycamore and Smith,	223.45	89.25
Washburn,	South side Acushnet ave., east,	49.70	29.25
Water,	East side, between Delano and Blackmer,	70.57	49.69
Willis,	South side Summer, east,	27.28	8.79
Wing,	South side, between Fifth and Sixth,	166.39	85.46
		5,355.23	$2,596.76

Concrete, Repaired.

Street.	Location.	New.	Rebuilt. Sq. Yards.	Top Coat. Sq. Yds.	Cost.
Ash,	West side, between Union and Arnold,			196.91	$55.98
Campbell,	North side, between Summer and Chestnut,		54.26		19.63
Chestnut,	East side, between Willis and Parker,		247.76		113.98
Cottage,	West side, between Allen and Bedford,			121.89	16.10
"	East side, between Sycamore and Smith,		115.1		49.46
County,	West side, between Rockland and Fair,			80.30	36.73
Cove,	North side, between Harbor and Water,	105.1	389.22		189.74
Crapo,	West side, between Washington and Grinnell,			88.86	19.37
Fifth,	West side, between Russell and Madison,			143.02	63.21
Fourth,	East side, between Grinnell and Wing,			78.39	23.40
Griffin,	North side, between Second street and Acushnet avenue,			164.20	78.75
Grinnell,	North side, between Fourth street and Acushnet avenue,			166.12	27.37
"	South side between County and Summer,			34.4	7.51
Maxfield,	South side, between Acushnet avenue and Purchase street,		18.16		7.81
"	South side, between County and Summer,		25.16		11.67
Mechanics lane,	North side, between Sixth and Eighth,	24.73		151.75	33.70
Merrimac,	South side, between Pleasant and State,		11.6		4.52
Mill,	North side, between Hill and County,			356.5	96.10
"	South side, between County and Summer,			237.75	43.14
"	South side, between Summer and Chestnut,			171.06	21.56
"	South side, between Cottage and Cedar,			42.70	12.51
North,	North side, between Foster and Hill,			188.42	32.79
Park Place,	Sixth street, west,		124.14		37.46
Pleasant,	West side, between High and Kempton,	61.71	92.07		66.94
"	West side, between Hillman and Maxfield,	71.41	151.04	5.79	90.49
"	West side, between Franklin and Merrimac,		226.62		87.88
Purchase,	West side, between Linden and Weld,			526.36	91.25
"	East side Logan, south,			457.86	61.58

Rockland,	South side County, west,			373.11	108.76
Second,	East side between Grinnell and Howland,		61.34		21.45
Sixth,	West side, between Bedford and Russell,		66.29		32.91
Smith,	North side, between County and Summer,	9.13	11.4		8.69
"	South side, between Chestnut and Cottage,		62.31		26.79
Spring,	South side, between Seventh and County,		347.31		131.36
Summer,	East side, between North and Hillman,		41.92		10.53
"	East side, between Hillman and Maxfield,		58.36		26.96
"	East side, between Maxfield and Sycamore,		243.63		110.06
"	East side, between Willis and Parker,		269.39		140.84
Sycamore,	South side, between County and Summer,		5.54		2.50
Willis,	South side Summer, east,		38.94		12.89
"	North side, between Summer and Chestnut,		30.03		19.30
Wing,	South side, between Fourth and Fifth,	19.89	82.51	4.28	65.28
	Sundry small repairs,				133.91
		291.97	2,774.10	3,589.67	$2,252.86

Flagging, Repaired.

Street.	Location.	New Stone, Sq. Yards.	Old Stone, Sq. Yards.	Cost.
Acushnet ave.,	East side, between Middle and High,	.4	102.82	$25.90
"	Both sides, between High and Mill,	8.39	198.32	68.48
"	East side, between Mill and North,	67.55	41.95	299.09
"	West side, between Mill and North,	73.38	29.29	
"	Both sides, between North and Hillman,	87.73	215.38	207.23
"	Both sides, between Hillman and Maxfield,	92.4	146.39	199.20
"	West side, between Maxfield and Campbell,	86.69	231.29	187.88
"	West side north of Lund's Corner,		3.78	7.76
Chestnut,	West side, between Maxfield and Sycamore,	23.73	46.8	59.62
Cottage,	West side, between Union and Arnold,	32.8		38.52
County,	West side, between Allen and Bedford,	38.71		76.19
Elm,	Both sides, between Purchase and Pleasant,	18.03	11.44	23.11
Foster,	East side, between Hillman and Maxfield,		7.11	11.40
Grinnell,	South side, between Second street and Acushnet ave.,	37.07	57.53	68.78
"	South side, between Crapo and Bonney,	7.3	111.23	39.55
Maxfield,	North side, between Acushnet ave. and Purchase street,	1.87	6.00	4.72
"	North side, between Chestnut and Cottage,	20.98	32.21	54.77
North,	North side, between Pleasant and Foster,	19.56	17.11	34.78
"	South side, between Pleasant and Foster,		26.77	5.16
Parker,	South side, between Summer and Chestnut,		21.34	7.76
Pleasant,	East side, between Union and William,	231.84	21.62	494.01
"	East side, between Mill and North,	46.67	56.19	174.70
"	West side, between North and Hillman,		107.29	36.07
"	East side, between North and Hillman,	94.35	29.82	169.52
"	East side between Hillman and Maxfield,		130.33	47.22
Purchase,	West side, between Middle and High,	26.	24.16	60.31
"	East side, between Maxfield and Campbell,		27.9	18.02
School,	North side, between Sixth and Seventh,	5.33		9.68

School,	North side, between Seventh and County,	10.22	8.89	37.78
Spruce,	West side, between Sycamore and Smith,	22.22		36.07
Summer,	East side, between Kempton and Mill,	36.84	39.69	90.89
"	West side, between Kempton and Mill,	27.32	59.65	84.38
"	West side, between Mill and North,	13.91	159.93	54.85
"	West side, between North and Hillman,	42.21	147.41	121.65
"	West side, between Hillman and Maxfield,	30.95	83.38	48.32
"	West side, between Maxfield and Sycamore,	23.23	115.23	81.17
"	West side, between Sycamore and Smith,	23.6	88.16	108.58
"	West side, between Smith and Campbell,		140.22	37.81
"	Both sides, between Campbell and Willis,	59.58	85.08	217.04
"	Both sides, between Campbell and Willis, new,	31.55	13.33	
"	West side, between Willis and Parker,		142.71	127.07
Union,	South side, between Water and First,	3.13		11.02
Water,	West side, between Division and Delano,	14.67	13.3	32.38
"	West side, between Gifford and Delano,	27.56		48.01
"	West side, between South and Grinnell,	17.78	8.02	33.14
"	West side, between Spring and Union,	8.24		23.34
Weld,	North side, between Bowditch and Purchase,		91.06	105.01
William,	South side, between Purchase and Pleasant,	25.15	12.74	73.74
	Sundry Small Repairs,			579.01
		1,438.94	2,912.87	$4,380.69

Gravel and Cinder Walks.

Street.	Location.	Cost.	
		Graded and Covered with Stone Screenings.	Cinders Covered with Stone Screenings
Acushnet ave.,	West side, between Delano and Blackmer,		$12.64
"	East side, between Blackmer and Rivet,	$2.07	
"	East side, between Logan and Washburn,	66.11	
"	West side, north of Lund's corner,	223.55	
"	Both sides, north of Davis's corner,	408.85	
Allen,	South side Cottage street, east,	12.47	
"	South side, between Columbia and Oak,		2.21
"	South side, between Page and Brigham,	3.70	
"	North side, between Page and Brigham,	40.31	
"	South side Rural, west,	6.78	
Arnold,	North side, between Ash and Chancery,	6.11	
"	South side Tremont, west,	7.25	
"	North side, between James street and Rotch avenue,	7.99	
Ash,	East side Hawthorn, south,	16.62	
"	West side Hawthorn, south,	18.68	
"	East side, between Court and Morgan	15.78	
"	West side, between Court and Elm,	8.76	
"	East side, between Elm and Middle,	3.77	
"	West side, between Kempton and Mill,	12.17	
"	East side, between Middle and Kempton,	26.03	
"	West side, between Middle and Kempton,	2.31	
"	Both sides, between North and Hillman,	11.46	
"	West side Maxfield, north,	8.28	
Ashland,	East side, between Durfee and Weld,		32.12
"	Both sides, between Weld and Clark,		76.02
Atlantic,	East side Union, south,		5.12
Austin,	North side Cedar, east,		9.93

Austin,	South side, between Cottage and Cedar,	64.67	
"	South side Cedar, west,		5.21
"	North side Cedar, west,		14.10
"	South side Shawmut ave., east,	15.06	
Babbitt,	North side Dartmouth, west,		14.79
Bay,	South side Ward, west,		33.95
"	North side Ward, west,		7.79
Bedford,	South side, between Borden and Ash,	20.88	
Beetle,	North side, between Front street and Acushnet ave.,		19.55
Belleville ave.,	West side, between Coggeshall and Sawyer,		4.15
"	East side Sawyer, north,		265.53
"	West side Sawyer, north,		152.91
"	East side, between Nye and Bullard,		16.98
"	East side, between Bullard street and Coffin ave.,		13.02
"	East side, between Coffin and Phillips avenues,		5.40
"	East side Phillips ave., north,		48.65
Blackmer,	South side Water, east,	7.73	
"	North side, between Second street and Acushnet ave.,		48.89
"	South side, between Second street and Acushnet ave.,		7.86
Bolton road,	East side Rivet, south,	85.54	
"	West side Rivet, south,	150.80	
Bonney,	Both sides, between Rivet and Rockland,	45.54	
"	West side Rockland, north,	1.63	
Bowditch,	West side, between Weld and Cedar Grove,		102.02
"	West side Coggeshall, north,		6.67
"	East side Coggeshall, north,		22.50
Bullock ave.,	East side, between Willow and Austin,		13.06
Campbell,	North side County, west,	19.47	
"	North side, between Cottage street and Shawmut ave.,		12.54
Cedar,	East side, between Middle and Kempton,	13.87	
"	West side, between North and Hillman,	17.62	
"	West side, between Maxfield and Willis,	17.13	
"	Both sides Parker, north,	23.38	
"	East side Locust, north,	4.46	
"	East side Austin, north,		6.34

Gravel and Cinder Walks.—*Continued.*

Street.	Location.	Cost.	
		Graded and Covered with Stone Screenings.	Cinders Covered with Stone Screenings.
Chancery,	East side, between Arnold and Union,		$22.65
"	West side, between Union and Court,		3.24
Cherry,	Both sides, between Sixth and County,	$64.13	
Chestnut,	East side Willis, south,	3.61	
"	West side, between Willis and Parker,	17.19	
"	East side, between Parker and Locust,	71.57	
"	West side, between Parker and Locust,	34.76	
"	East side, between Locust and Robeson,	2.66	
Clay,	West side, between Oak and Columbia,		15.34
Coffin ave.,	North side Belleville ave., east,		8.86
Coggeshall,	South side Belleville ave., east,		123.81
"	North side Mitchell, east,		11.82
"	North side Acushnet ave., east,	66.62	
Commercial,	South side, between Front and Water,	15.22	
Cottage,	East side, between Middle and Kempton,	15.28	
"	East side, between Mill and North,	8.90	
"	East side, between Maxfield and Sycamore,	19.36	
"	West side Campbell, north,		18.27
"	East side Parker, south,	40.14	
"	East side Parker and Locust,		52.63
"	West side, between Willis and Parker,	37.51	
"	West side, between Locust and Robeson,		10.71
"	East side, between Locust and Robeson,		5.61
"	West side, between Willow and Austin,		25.76
County,	West side Blackmer, south,	7.15	
"	East side Blackmer, south,	11.53	
"	West side Cedar Grove and Coggeshall,		5.81

County,	West side, between Coggeshall and Sawyer,		17.14
Court,	Southwest corner of Tremont,	18.98	
Cove road,	North side, between County and Crapo,		44.46
Cove,	North side Water, east,	64.55	
"	South side Water, east,	4.16	
Crapo,	West side, between Washington and Rockland,		2.43
"	East side, between Winsor and Katharine,		4.83
Dartmouth,	West side, Rockdale ave., north,		4.35
"	East side, between Rivet and Fruit,	3.23	
"	West side Rockland, south,	155.28	
"	East side Rockland, south,	12.12	
"	East side, between Rockland and Washington,		10.29
"	East side Grinnell, north,	27.12	
Davis,	South side Belleville ave., west,		43.27
Deane,	North side, between Belleville and Acushnet avenues,		112.47
"	South side, between Belleville and Acushnet avenues,		18.41
Delano,	North side, between Second and County,		3.90
Division,	South side, between County and Bonney,		58.30
"	North side, between County and Crapo,		70.03
East French ave.,	West side Cove street, south,		17.11
Elm,	North side County and Summer,	5.24	
"	North side Park and Newton,		2.23
"	North side Newton and Liberty,		16.78
Emerson,	East side Arnold and Union,		26.67
Field,	Both sides Stowell and Babbitt,		75.15
First,	East side, between Grinnell and Howland,	8.45	
Florence,	West side, between Elm and Court,		13.81
"	West side, between Court and Kempton,	24.02	
Fourth,	East side, between Rivet and Potomska,		3.32
Front,	West side, between Potomska and South,	56.70	
"	East side, between Blackmer and Rivet,		24.46
"	East side, between Grinnell and Howland,		122.68
"	West side, between Grinnell and Howland,		21.42
"	West side, between Wamsutta and Logan,	86.91	
"	East side Coggeshall, north,		14.32

GRAVEL AND CINDER WALKS.—*Continued.*

STREET.	LOCATION.	COST.	
		Graded and Covered with Stone Screenings.	Cinders Covered with Stone Screenings.
Front,	West side, between Sawyer and Holly,		$15.49
Fruit,	South side Mulberry, east,		3.76
Grape,	South side Oak and Rural,		77.61
"	North side Oak and Rural,		44.09
Green,	East side, between Allen and Bedford,	$4.48	
Griffin,	South side Water, east,		10.48
Harrison,	North side, between Oak and Ward,	64.15	
"	South side, between Oak and Ward,	15.99	
Hawthorn,	South side, between Page and Brigham,	14.55	
"	North side Rotch avenue, west,	9.81	
Hemlock,	East side Rockland, south,		75.32
"	West side Rockland, south,		31.29
Hickory,	Both sides Dartmouth, north,	10.10	
Hillman,	North side, between Park and Newton,	5.72	
Holly,	South side Acushnet avenue, east,		5.75
"	North side Bowditch, west,		35.01
"	South side Bowditch, west,		19.48
Homer,	Both sides, between Parker and Locust,		8.45
Howard,	East side, between Cedar Grove and Beetle,		47.29
"	West side Coggeshall, north,		13.56
Independent,	South side County, west,		102.98
"	North side County, west,		49.76
Katharine,	South side County, west,	21.55	
"	North side, between County and Crapo,		116.93
Kempton,	North side, between Ash and Chancery,	31.98	
"	South side, between Park and Newton,	4.02	
"	North side Rockdale avenue, east,	5.64	

Liberty,	West side, between Union and Court,	5.56	
"	West side Court, north,		12.15
"	East side, between Court and Kempton,		44.98
"	West side, between Elm and Kempton,		8.61
Locust,	North side, between Chestnut and Cottage,		5.49
"	South side Cottage, west,		10.69
Lombard,	East side Rockland, south,		39.62
Maitland,	North side, between Richmond street and Shawmut ave.,		34.43
Maxfield,	South side, between Second street and Acushnet ave.,	6.61	
"	North side Ash, east,	9.93	
"	South side, Ash, east,	15.08	
"	North side Ash, west,	30.51	
"	South side, between Chancery and Park,		3.30
"	South side Park, west,	53.43	
McGurk,	West side Middle Point road, north,	34.13	
Mechanics lane,	South side Eighth, east,	4.14	
Mitchell,	East side, between Coggeshall and Sawyer,		9.49
"	West side, between Coggeshall and Sawyer,		1.11
Mosher,	South side, between County and Crapo,		13.04
Mulberry,	West side, between Rivet and Fruit,		35.83
"	East side, between Rivet and Fruit,		12.39
Myrtle,	West side, between Clark and Weld,		50.06
"	East side Weld, north,		33.92
"	East side, between Clark and Weld,		5.30
Nelson,	Both sides County, west,		184.90
Newton,	East side, between Elm and Kempton,		3.91
North Front,	West side Coggeshall, north,		16.40
"	West side Sawyer, south,		15.55
"	West side Sawyer, north,		32.52
North,	South side, between Ash and Chancery,		41.02
"	South side, between Chancery and Park,		23.70
Oak,	West side Allen, south,		34.48
"	Both sides Dartmouth, west,	41.89	
Palmer,	West side Kempton, south,		59.47
Page,	Both sides, between Grape and Allen,		47.88

Gravel and Cinder Walks.—*Continued.*

Street.	Location.	Cost.	
		Graded and Covered with Stone Screenings.	Cinders Covered with Stone Screening.
Park,	West side Union, south,	$3.91	
"	East side Kempton, south,	50.40	
"	West side Kempton, south,	12.97	
Parker,	South side, between Cedar street and Shawmut ave.,	22.72	
"	North side, between Shawmut ave. and Chancery street,		$10.10
Plainville road,	Between O. C. R. R. and Dartmouth line,	18.00	
Pleasant,	East side, between, Union and William,	77.29	
"	East side, between Hazard and Austin,	8.93	
Potomska,	South side, between Water and First,	2.70	
Reed,	West side Kempton, south,		26.38
Reynolds,	East side Weld, north,		64.40
"	West side Weld, north,		2.21
Rivet,	North side, between County street and Bolton road,	4.58	
"	South side, between Crapo and Bonney,		3.27
"	North side, between Bolton road and Dartmouth street,		80.85
"	South side, between Bolton road and Dartmouth street,		3.45
Robeson,	South side Cottage, west,		23.23
"	South side, between Cedar street and Shawmut ave.,		6.35
Rockdale ave.,	East side Allen, south,		17.34
Rockland,	North side, between County and Crapo,		34.80
"	South side, between Crapo and Bonney,	9.19	
"	North side, between Crapo and Bonney,		10.26
"	South side Bonney, west,		15.34
"	Both sides, between Hemlock and Dartmouth,	95.87	
"	South side, between Bonney and Dartmouth,	4.06	
Rotch ave.,	West side, between Hawthorn and Arnold,	19.21	
Rounds,	Both sides, between Court and Kempton,		61.62

Rounds,	East side Kempton, south,		7.46
Sawyer,	South side, between Mitchell street and Belleville ave.,		23.14
"	North side Acushnet avenue, east,	4.60	
"	North side, between Bowditch and Purchase,		11.70
"	South side, between Bowditch and Purchase,		17.90
Scott,	North side County, west,		61.03
Second,	West side, between Delano and Blackmer,		36.43
"	West side, between Rivet and Potomska,		23.38
"	West side, between Potomska and South,		42.16
"	East side, between Potomska and South,		45.27
"	West side, between South and Grinnell,	51.81	
"	East side, between North and Hillman,	20.59	
Shawmut ave.,	West side Parker, north,	48.23	
"	West side, Durfee, north,		51.71
"	East side, Durfee, south,	68.57	
"	West side Durfee, south,	13.64	
"	West side, between Mt. Vernon and Grand,		25.46
"	Hathaway road, north,	6.45	
Smith,	South side, between County and Summer,	5.24	
"	South side, between Summer and Chestnut,	7.05	
Spooner,	South side, between Lombard and Dartmouth,		14.41
Spruce,	East side, between Maxfield and Sycamore,	13.40	
"	West side, between Maxfield and Sycamore,	5.86	
"	East side, between Sycamore and Smith,	2.12	
Stapleton,	East side, between Cove road and Cove street,		13.23
"	West side, between Cove road and Cove street,		3.25
State,	East side Weld, North,		6.74
"	East side, between Clark and Penniman,		7.09
Summer,	East side, between North and Hillman,	5.87	
"	East side, between Hillman and Maxfield,	5.05	
"	East side, between Sycamore and Smith,	20.59	
Tarkiln Hill road,	North side Lund's corner, west,	2.93	
Thompson,	South side County, west,	7.14	
Tremont,	West side, between Hawthorn and Arnold,	26.33	
"	West side, between Arnold and Court,		21.32

Gravel and Cinder Walks.— *Concluded.*

Streets.	Location.	Cost.	
		Graded and Covered with Stone Screenings.	Cinders Covered with Stone Screenings.
Union,	Both sides, between Ash and Park,	$62.73	
"	South side, between Park and Atlantic,		$20.34
"	South side, between Atlantic and Tremont,		3.06
"	North side, between Tremont and James,		33.61
"	South side, between Tremont and James,		15.73
Walden,	Both sides Sycamore, north,	31.45	
Washburn,	South side Acushnet avenue, east,	6.10	
"	North side, between Belleville avenue and Front street,	11.87	
Water,	East side, between Rivet and Potomska,		32.01
"	East side Blackmer, south,	33.70	
"	East side, between Middle and High,	11.05	
Weaver,	North side, between Dartmouth and Field,	37.37	
Weld,	North side County, west,		7.67
"	South side, between County and Reynolds,		45.59
"	South side, between Ashland and Mt. Pleasant,		28.36
"	South side, between Bowditch and Purchase,	11.27	
"	North side, between Acushnet avenue and Bowditch,		6.77
West French ave.,	East side Cove street, south,	31.22	
Willis,	South side, between County and Summer,	34.83	
"	South side, between Summer and Chestnut,	4.55	
"	South side Cedar, east,	22.42	
"	North side Cedar, east,	11.58	
Willow,	North side Shawmut ave., east,		7.97
"	South side Shawmut ave., east,		11.26
Wilson,	West side, between Austin and Durfee,		37.31
Winsor,	North side, between County and Crapo,		7.01
	Sundry small repairs,		121.14
		$3,623.93	$4,578.89

Total cost, ... $8,202.82

Drains Laid — Pipe Furnished.

Number.	Size Pipe.	Length.	Cost.	Average Cost per Foot.
136	5-inch	6,840 feet	$2,575.67	.376
45	6 "	2,488 "	1,070.12	.430
4	8 "	426 "	169.73	.398
2	10 "	834 "	1,377.66*	1.651*
187		10,588 feet	5,193.18	
	Pipe not Furnished.			
210	5-inch		$2,179.51	
35	6 "		533.24	
5	8 "		440.80	
1	10 "		4.35	
438 drains laid.			$8,351.08	

Drains Repaired.

54 drains repaired, ... $305.37
Including pipe furnished, viz.: 90 feet 5-inch,
14 feet 6-inch,
62 feet 8-inch.

Drains Cleared.

127 drains cleared, ... $335.57

Total cost of drains, new, repaired and cleared, ... $8,992.02

* Including 5 man-hole castings.

Note.— The Board voted June 13, 1893, to furnish no more pipe for private drains.

RECAPITULATION—HIGHWAYS AND STREETS.

GROSS EXPENDITURES.

ACCOUNTS AS PER TABLES:

Macadam, new,	$17,043.81
Macadam, repaired,	9,355.64
Streets filled and graded,	26,564.34
Curbing, new and relaid,	9,405.93
Gutters, new,	3,034.17
Gutters, repaired,	1,978.86
Concrete sidewalks, new,	2,596.76
Concrete sidewalks, repaired,	2,252.86
Gravel and cinder sidewalks,	8,202.82
Paving, new,	18,540.33
Paving, repaired,	7,557.33
Flagging, repaired,	4,380.69
Crosswalks, new,	255.09
Crosswalks, repaired,	1,656.32
Drains, new, repaired and cleaned,	8,992.02

ACCOUNTS NOT INCLUDED IN TABLES:

Sweeping and cleaning streets,	$8,247.18
Removing snow and ice,	1,995.83
Sanding icy walks,	318.15
Picking up small stones,	41.32
Carting stock to city stable yard,	205.30
Carpenter shop, including fitting up new shop,	666.51
Trimming trees,	725.45
Labor, city stable yard,	586.14
Tool houses repaired,	41.38
Filling holes in streets,	780.51
Tools, new and repaired,	576.78
Oil,	192.52
Hack hire,	93.25
Paint shop,	196.57
Janitor,	208.00
Stable office expenses, including salaries,	622.97
Main office expenses, including salaries,	7,418.23
Registration clerk,	200.00
City stable lot filling,	65.98
Street scraper repaired,	6.30
Pumps repaired, Plainville and Sisson's corner,	22.44

Manilla, marline, lanterns, seine, twine, tapes, freight, telephone messages, etc.,		$225.50	
Printing and binding annual reports,		110.85	
Wharfage for paving stones and piling blocks,		364.55	
Ames plow,		30.50	
Bank wall Davis St., north side, east of Acushnet avenue,		143.41	
Advertising,		143.70	
Fence repaired, Howard avenue, east of Belleville avenue,		13.64	
Fence repaired, Summer, east side, between Willis and Parker,		9.44	
Fence repaired, Cove road, east of Crapo,		35.56	
Small repairs to fences,		6.84	
Sundry small repairs to wheelbarrows, sheds, derricks, concrete heater,		139.62	
Union street dock, filling,		1,017.64	
Miscellaneous items,		1,401.30	
STOCK, LABOR AND TEAMING:			
General sewers,	$4,296.47		
Sundry sewers,	3,588.48		
Engineering department,	891.27		
New Bedford and Fairhaven bridge,	157.53		
New Bedford poor department,	503.45		
New Bedford water works,	41.43		
New Bedford school department,	18.51		
City property,	30.01		
Parks and squares,	843.16		
Cemeteries,	126.27		
Sundry parties,	7,847.46	18,344.04	
Stock on hand, January 1, 1894,		3,306.98	$170,321.35
CREDITS.			
Appropriation,		$120,000.00	
Received for stock, labor and teaming,		43,572.41	
Stock on hand, January, 1, 1893,		10,275.09	
Pay roll, No. 52, approved, but not audited, to be paid from appropriation of 1894,		671.07	174,518.57
Expended,			$170,321.35
Balance,			$4,197.22

NET EXPENDITURES, HIGHWAYS AND STREETS.

Appropriation,			$120,000.00
CREDITS.			
Pay Roll, No. 52, to be paid in 1894,		$671.07	
Credit Balance,		4,197.22	$4,868.29
Net expenditure of appropriations of 1893,			$115,131.71

Credits for work done previous to 1893,	$12,109.20	
Unpaid Bills due Jan. 1, 1894,	4,167.76	
Credits available for use in 1893,		$7,941.44
Total net cash available and used in 1893,		$123,073.15
Decrease in stock during the year as shown by inventory of same,		10,399.24
Total Outlay,		$133,472.39

STREET DEPARTMENT.

INVENTORY OF PROPERTY, STABLE AND TOOL HOUSES, JANUARY 1st, 1894.

11 axes,	$6.50
1 bushel basket,	.50
26 feed baskets,	13.00
2 sets large blocks and falls,	15.00
5 sets small blocks and falls,	25.00
45 horse blankets,	55.00
26 brushes,	26.00
24 mane brushes,	8.00
74 iron bars,	74.00
2 punch bars,	1.50
29 paving brooms,	14.50
2 new brooms,	.50
5 tampering bars,	5.00
1 bit and stock,	1.50
2 brooms for street sweeper,	30.00
4 metal blocks,	20.00
20 lbs. backing and wedges,	2.00
1 set wire blocks and falls,	50.00
1 rubber horse cover,	5.00
25 combs,	6.00
14 feet, 18 inches crosswalk, new,	7.00
3 chain claws,	6.00
188 feet, 24 inches crosswalk, new,	119.28
1 cabinet for books,	8.00
4 chairs,	1.00
11 carts, double,	2,000.00
1 water cart,	125.00
10 single carts,	1,200.00
5 steel collars,	15.00
6 squirt cans,	1.80

14 one gallon oil cans,	$5.00
50 stone chisels,	25.00
10 stone chains,	20.00
1 sixty gallon oil can,	3.00
2 trace chains,	6.00
597 feet new corner curbing, 138 pieces,	286.56
1 hay cutter,	8.00
100 feet old crosswalk,	20.00
583 feet, 5 inches curbing, new,	280.04
6 dippers,	.75
82 drills, hand,	13.50
2 slip drags,	10.00
15 tons dressing,	15.00
1 wheel derrick,	30.00
7 eveners,	10.00
300 feet old flagging,	45.00
16 hay forks,	8.00
380 feet new flagging,	60.80
15 bushels grain,	9.00
Two-thirds barrel axle grease,	10.00
1 single gear,	75.00
2 derrick gears,	550.00
10 tons pounding gravel,	10.00
5 cotton hooks,	.50
1 bill hook,	.75
7 chocking hammers,	3.50
3 drill hammers,	6.00
1 dressing hook,	.50
12 double harnesses,	420.00
3 light harnesses,	40.00
11 single harnesses,	220.00
27 paving hammers,	27.00
2 sets double lead harnesses,	50.00
1 single lead harness,	12.00
1 express harness,	10.00
35 horses,	4,700.00
41 halters,	35.00
54 hoes,	15.00
1 road harrow,	40.00
12 street horses,	4.25
12 stone breaking hammers,	5.00
11 striking hammers,	22.00
10 tons hay,	200.00
3 tool houses,	110.00
4 saw handles,	.60

2 branding irons,	$3.00
1 jigger,	100.00
1 ratchet jack,	10.00
3 wheel jacks,	5.00
1 whiskey jack,	45.00
1 hay knife,	1.00
70 lanterns,	35.00
4 reflecting lanterns,	4.00
8 extension ladders,	14.00
8 spirit levels,	13.75
1 gallon measure,	.25
1 lawn mower,	4.00
66 mattocks,	30.00
9 tape measures,	4.50
30 pigs,	96.00
14 pails,	7.00
2 water pots,	1.00
1 belt punch,	.25
12 dirt pounders,	5.00
14 plow points,	3.00
3 pairs pincers,	1.50
17 paving pounders,	34.00
1 plow,	20.00
3 water pails,	1.50
213 picks,	213.00
75 new pails,	37.50
13,460 new paving blocks,	874.30
8 carriage robes,	25.00
19 iron rakes,	9.50
64 lantern rods,	9.00
800 lbs. old rope,	8.00
1 stone road roller,	75.00
1 set runners, lumber wagon,	8.00
3 stone reamers,	1.50
3 wooden rakes,	1.50
1 iron road roller,	250.00
1 riding saddle,	5.00
2 ash sleds,	200.00
1 pair barrel skids,	2.00
50 tons beach sand,	50.00
8 crosscut saws,	25.00
150 tons cobble paving stone,	150.00
500 tons crushed stone,	500.00
250 tons crushed stone,	250.00
200 tons fine crushed stone,	200.00

1 dirt scoop,	$6.00	
6 hand saws,	6.00	
4 iron squares,	3.00	
36 iron snow shovels,	35.00	
2 marlin spikes,	.50	
2 post hole shovels,	1.50	
1 road scraper,	50.00	
8 wooden snow shovels,	4.00	
4 tons straw,	56.00	
1 garden spade,	2.00	
400 tons screenings,	400.00	
4 long straight-edges,	2.00	
4 sickles,	1.00	
2 sets Fairbank's scales,	200.00	
1 saw and saw horse,	2.00	
7 ice spades,	3.50	
1 sleigh,	25.00	
1 street sweeper,	100.00	
1 set horse slings,	18.00	
3 stoves and pipe,	15.00	
4 sand screens,	20.00	
4 steam road roller signs,	8.00	
25 short grade stubs,	.50	
90 10-inch stubs,	1.50	
9 5-feet stubs,	.50	
21 stone sledges,	50.00	
12 stone sets,	10.00	
3 scythes and snaths,	3.00	
10 L. H. R. P. shovels,	5.00	
16 L. H. S. P. shovels,	8.00	
91 S. H. R. P. shovels,	45.50	
24 S. H. S. P. shovels,	12.00	
20 S. H. scoop shovels,	10.00	
3 brick trowels,	.75	
1 hay truck,	5.00	
5 tool boxes (one on wheels),	40.00	
1 large table,	5.00	
1 water tank,	5.00	
3 long steel wedges,	3.00	
1 wagon with top,	200.00	
2 express wagons,	125.00	
9 iron wheelbarrows.	45.00	
1 lumber wagon,	65.00	
2 light driving wagons,	150.00	
5 monkey wrenches,	6.50	
	———	$16,362.63

MACHINE SHOP.

50 feet rawhide belt lacing,	$ .75
30 feet new rubber belt,	20.00
1 copper boiler,	1.50
1 bar iron,	2.00
75 feet 2½-inch belt,	11.00
20 feet 2-inch belt,	2.25
1 single block, 12-inch,	1.50
12 nut blanks, ¾-inch,	.15
1 15-inch chuck,	18.00
1 Stetson chuck No. 2,	3.00
2 small oil cans,	.60
2 1-gallon oil cans,	1.00
4 large oil cans,	1.00
3 cold chisels,	1.50
1 clock, office,	3.00
1 guage glass cutter,	1.50
6 twist drills, ½-inch to 15/16-inch,	5.00
11 rubber diaphragms,	22.00
2 diaphragm tops to pumps,	8.00
1 ratchet drill and drills for same,	8.00
1 breast drill,	2.50
1 dozen sheets emery cloth,	.25
1 tinman's furnace,	1.50
4 bastard files, ½ inch square by 12 inches,	.80
4 12-inch mill files,	.80
2 12-inch ½ round files,	.35
10 6-inch ½ round files,	1.50
6 files 6-inch by ¼ inch square,	.60
5 lbs. garlocks ¼-inch to ½-inch,	2.00
2 sets boiler grates,	8.00
1 guage glass 12 inches by ½ inch and six rubber washers for same,	.50
1 small steam guage,	4.00
1 grindstone and stand,	6.50
1 8-inch hack saw frame, 3 blades for same,	1.35
1 dozen sets steam hose fittings,	24.00
5 handgears, 18 feet shafting, one 15/16-in. drain,	10.00
1 level,	1.50
4 lathes, dog,	3.00
1 engine lathe,	20.00
5 lbs. lathe tools,	1.00
1 set letters and figures,	4.00
4 ladles,	5.00
3 small hand lamps,	1.30

2 ladders,	$2.00	
2 ½-gallon measures,	.35	
2½ barrels crusher oil,	12.60	
2½ barrels cylinder oil,	58.50	
½ barrel sperm oil,	16.74	
¾ barrel lard oil,	27.00	
18 gallons neat's-foot oil,	18.00	
8 sand pumps,	8.00	
4 ½ inch fusible plugs,	3.00	
3 lbs. Tucks' packing,	.75	
4 lbs. Eureka packing,	2.00	
1 set differential pulleys, 3 tons,	34.00	
1 pulley, 4 in. face, 24 in. diameter,	2.00	
150 lbs. old lead pipe,	5.00	
1 pair plyers,	1.25	
1—1¼ inch pipe die and stock,	12.50	
1 side plate Steam Road Roller,	22.50	
2 lbs. sheet rubber,	.30	
2 soldering irons, ½ lb. solder,	2.00	
2 small sledges,	2.00	
1 12 in. iron square,	.75	
1 pair small tinware shears,	2.50	
1 set taps and dies,	7.65	
3 60 gallon oil tanks,	8.00	
5 safety valves,	50.00	
1 vise, 4 in. jaw,	4.00	
1 18 in. Stilson wrench,	2.25	
1 10 in. Stilson wrench,	2.00	
1 12 in. monkey wrench,	.65	
1 tap wrench,	1.00	$521.49

STATIONARY ENGINE AND BOILER.

1 Axe,	$ .50	
40 feet 10 in. belting, old,	10.00	
35 feet 5 in. belting, old,	5.00	
4 cans oil, (small)	1.00	
5 cans oil, (large)	1.25	
1 cleaner tube,	1.00	
1 set belt clamps,	2.50	
1 ton coal,	3.50	
1 engine and boiler,	500.00	
1 hammer, hand,	1.25	
1 hoe,	1.00	
50 feet ½ in. rubber hose,	5.00	
1 poker,	1.00	

3 belt punches,	$1.50	
1 saw,	.50	
1 scoop shovel,	.50	
1 slice bar,	1.00	
1 screw driver,	.25	
1 12 in. wrench, monkey,	.85	
1 18 in. wrench, monkey,	1.50	
6 wrenches, flat,	1.50	$540.60

PORTABLE ENGINE AND BOILER.

1 axe,	$ .50	
65 feet 9 in. rubber belt (new)	40.00	
1 bar, slice,	1.00	
1 chisel,	.25	
1 chest, tool,	2.00	
2 oil cans, (small,)	.50	
2 oil cans, (large)	.75	
1 cask, water,	7.00	
1 pair dividers,	.25	
1 portable engine and boiler,	350.00	
1 hoe,	1.00	
1 handsaw,	.50	
100 feet ½ in. rubber hose,	10.00	
1 level, spirit,	1.50	
1 poker,	1.00	
1 force pump,	2.00	
1 iron square,	1.00	
1 screw driver,	.25	
1 scoop shovel,	.50	
1 tape measure,	2.00	
1 18 in. monkey wrench,	2.25	
1 24 in. monkey wrench,	2.25	$426.50

STEAM ROAD ROLLER.

1 bar, punch,	$1.00	
1 bar, slice,	1.00	
1 gov. belt, rubber,	2.00	
1 can, tin gal.,	.25	
1 chest, tool,	3.50	
1 cleaner, tube,	1.25	
3 tons coal, Pocohontas,	13.50	
2 small chains,	1.00	
1 canvas for roller, (poor)	.50	
2 cans, brass, oil,	.50	
4 steel gears, (new)	38.64	

50 feet ½ in. rubber hose,	$3.00	
25 feet 1 in. rubber hose,	30.00	
1 hand hammer,	1.25	
87 picks, roller,	40.00	
1 roller, steam,	3000.00	
1 shovel,	.50	
1 12 in. wrench, monkey,	.65	
1 18 in. wrench, monkey,	1.50	
1 12 in. wrench, Stilson,	2.25	
5 wrenches, flat,	1.25	
2 wrenches, socket,	1.00	$3144.54

STONE CRUSHER AND ELEVATOR.

1 cross bar,	$1.00	
12 steel bushings,	37.80	
400 Elevator bolts,	4.00	
1 beveled gear, 20 in. elevator,	5.00	
6 cheek plates,	64.80	
2 fixed plates,	31.00	
4 jaw plates,	62.00	
31 toggle plates,	78.43	
2 stone crushers,	300.00	
1 stone pocket, elevator and screen,	900.00	
1 hind wheel,	19.00	$1503.03

STOCK IN BLACKSMITH SHOP.

1 2½ in. axle and hub, new,	$16.25	
26 axle clips,	2.50	
324 lbs. anvil,	32.40	
209 lbs. anvil,	20.90	
175 lbs. anvil,	17.50	
1 axletree set,	5.00	
30 lbs. bolts, whiffletree,	8.00	
75 lbs. bolts, machine,	3.00	
15 lbs. borax,	1.80	
3048 lbs. bolts,	121.92	
1650 lbs. bolts, tire,	8.25	
2 bit stocks and 6 bits,	5.44	
2 bands, hub,	2.00	
2 benches, tool,	3.00	
2 pairs bellows,	34.00	
2 bolt racks,	4.00	
1 bit splice,	.50	
1 bolt clipper,	5.00	

50 lbs. backing,	$10.00
7 breeching hooks,	1.75
100 lbs. chains, old,	1.00
3 chisels, cold,	3.00
1 cone, new,	14.00
2 cast iron blocks, new,	23.10
1 cast iron block, 200 lbs.,	6.00
4 chisels, hot,	2.25
3 cutters, anvil,	2.75
7 tons coal, blacksmith,	30.00
4 clamps, hand,	3.00
1 chisel, long,	.50
14 chisels, hand, cold.	2.80
1 cup, oil,	.30
15 drift pins,	3.00
2 drawing knives,	.60
1 drilling machine and drills,	25.00
420 lbs. fence for flower beds,	4.20
2 files, round,	.60
24 files, flat,	7.20
5 files, square,	1.50
8 fullers, top,	12.00
7 fullers, bottom,	10.50
3 forges, brick,	192.15
4 flatters,	8.00
1 forge, Buffalo,	24.00
4 forge pokers and shovels,	4 00
460 lbs. horse shoes, heeled and toed,	46.00
69 lbs. horse shoe nails,	12.42
9 handles, file,	45.00
6 horses, wooden,	6.00
72 handles, sledge,	15.00
24 handles, pick,	6.00
3 hammers, new,	4.50
97 lbs. horse shoes, old,	1.94
33 lbs. horse shoes, steel,	4.06
2 hammers, sledge, large,	6.00
3 hammers, sledge, small,	9.00
3 sets hammers,	4.00
12 hooks, chain trace,	3.00
869 lbs. horse shoes, new,	34.76
255 lbs. iron, small band,	7.65
365 lbs. iron, large band,	16.75
2505 lbs. iron, refined,	56.75
645 lbs. iron, Norway,	25.80

940 lbs. iron, round,	$923.50
3 iron racks,	30.00
500 lbs. iron, refined pieces,	10.00
4 lag screws,	.24
1 ladder,	1.00
10 lbs. nuts,	.50
55 lbs. nuts, old,	1.10
2 overhauls,	1.00
200 lbs. punches and pieces steel,	18.00
2 plates, floor, new,	4.43
4 pails, wooden,	.40
30 lbs. rivets,	3.00
8 rasps,	2.80
50 lbs. steel tire,	2.00
40 lbs. steel spring,	3.20
25 lbs. steel, machine,	1.00
737 lbs. steel, cast and drill,	66.33
195 lbs. steel, wedge,	14.63
135 lbs. steel, pick,	9.94
135 lbs. steel, backing,	9.45
47 lbs. steel, toe calks,	3.52
250 lbs. steel, old steam drill,	10.00
28 lbs. springs, old,	1.84
5 lbs. springs, new for seats,	5.50
2 swage blocks,	6.00
12 swages,	5.00
8 swages, bottom,	21.00
1 spokeshave,	1.50
1 set screw plates, 7 sizes and taps,	12.00
1 set screw plates, 6 sizes and taps,	35.00
2 sharpening stakes,	3.00
3 squares, steel,	3.00
1 shovel, L. H. S. P.,	.50
1 shovel, S. H. S. P.	.50
2 shoeing boxes and tools,	10.00
4 package screws, wood,	.60
40 lbs. toe calks,	3.20
1 tire binder,	24.00
1 tire oven,	50.00
1 tire sprinkler,	40.00
1 set tire stone,	25.00
20 pairs tongs, large,	23.00
12 pairs tongs, small,	10.00
2 troughs,	8.00
1 traveler,	1.50

60 lbs. tools, heading,	$6.00	
1 set tools, wedge,	1.25	
3 sets tools, steam drill,	15.00	
1 vise, new,	15.30	
2 vises,	6.50	
1 vise calking,	14.00	
7 wrenches, fork,	8.12	
1 wrench, monkey, large,	2.50	
1 wrench, monkey, small,	1.50	
1 wrench, key,	3.50	
5 wrenches, tap,	7.00	
1 wheel, horse,	2.50	$1534.09

CONCRETE STOCK.

1 axe,	$1.00	
2 iron bars,	2.00	
1 paving broom,	.50	
1 oil can,	.25	
2 long-handled dippers,	4.00	
2 sand heaters,	20.00	
2 large hoes,	.50	
2 portable tar kettles,	30.00	
1 spirit level,	1.50	
1 mattock,	1.00	
5 pick axes,	5.00	
2 barrels pitch,	7.00	
2 concrete pounders,	8.00	
1 galvanized iron pail,	.50	
2 stone rollers,	19.00	
4 iron rakes,	2.00	
1 wood saw,	1.00	
1 sand screen,	5.00	
4 L. H. R. P. shovels,	2.00	
2 tons concrete sand,	2.00	
10 barrels tar,	45.00	
2 iron wheelbarrows,	10.00	$167.25

CARPENTER SHOP, STOCK AND TOOLS.

1 axe,	$1.00	
5 augers, 1 in. to 2 in.,	3.00	
1 auger, hollow,	4.00	
4 axe handles,	.80	
1 adze,	2.00	
1 angle borer,	1.00	
1 belt punch,	.90	

1 broom,	$ .25
3 bradalls,	.15
5 papers brads,	.25
2 bitstocks,	2.00
28 bits 1/8 in. to 1 1/8 in,	7.00
1 pair dividers,	.65
2 drawing knives,	1.15
1 boring machine and 4 bits,	7 50
1 bevel square,	.35
1 bit extension and 2 cutters,	3.00
2 bars iron,	3.00
1 oil squirt can,	.25
1 chisel, ripping,	.50
14 chisels, 1/8 in. to 2 in.,	7.00
1 counter sink,	.25
1 pair cutting plyers,	.65
1 pair compasses, large,	2.00
2 chests for tools,	8.00
4 clamps, wood, 2 large and 2 small,	2.40
4 clamps, iron, 2 large and 2 small,	2.50
2 clamps, iron, heavy,	18.00
10 drills, twist, 1/8 in. to 5/8 in.,	2.80
18 files,	1.75
5 gouges,	1.75
12 glass (lights),	12.50
7 hasps, 5 large, 2 small,	2.20
2 hatchets,	1.00
3 hammers, claw,	.75
1 hammer, ruffin,	.30
1 hammer, heavy,	.60
10 pairs hinges, strap, 5 large, 5 small,	2.50
1 ladder,	.40
2 levels, spirit, 1 large, 1 small,	3.25
2000 feet lumber, oak,	120.00
100 feet lumber, ash,	6.00
400 feet lumber, pine,	22.00
75 feet lumber, whitewood,	3.75
400 feet lumber, hard pine,	14.00
500 feet lumber, spruce,	12.50
2 maul tops,	4.00
2 mallets,	.75
300 pounds nails, cut,	9.00
100 pounds nails, wire,	3.50
5 pounds nails, wrought,	.35
7 planes,	5.00

1 plane, circular,	$4.50	
4 padlocks,	1.00	
1 reamer,	.25	
1 spoke pointer,	1.00	
1 screw driver, interchangeable,	1.25	
18 Shives tackle blocks,	4.70	
9 Shives tackle blocks,	12.24	
7 Shives tackle blocks,	2.52	
1 screw, jack,	1.50	
2 spokeshaves,	1.00	
3 screw drivers,	.45	
1 saw set,	.65	
1 slip stone,	.25	
2 stones, oil,	.75	
2 squares, try,	1.00	
3 squares, iron, 2 large, 1 small,	2.00	
2 saws, compass,	1.50	
8 saws, hand,	14.00	
1 saw, circular,	9.00	
1 saw, table,	20.00	
1 saw, clamp,	.75	
10 gross screws,	2.50	
3 papers iron tacks,	.18	
2 Vise's iron woodworkers,	24.00	
2 wheel rims, heavy,	12.00	
2 wheel rims, 6-inch,	9.00	
3 wrenches, monkey,	2.20	
1 wheel horse.	2.00	$442.39

Sewers Built in 1893.

Street.	Location.	Total Cost.	Amount Assessed.	Cost per Foot.	Length.	Average Depth.	Cubic Yds. Ledge.	Pipe. 10-in.	12-in.	15-in.	18-in.	24-in.
BY SPECIAL	APPROPRIATION.											
Bowditch,	From 50 ft. south of s. l. Coggeshall to n. l. Beetle,	$1,796.77	$898.39	$4.09	438.7	11.18	160.3	438.7				
Bullard,	From Belleville ave., to 5 ft. e. of w. l. Front,	2,051.28	1,025.64	2.99	686	9.45	134.16	304	382			
Coffin ave., No. 2,	(Not completed. Money transf'd to unappropriated funds)	13.36										
Cove road, No. 3,‡	From 3.80 ft. e. of w. l. Margin to 1.23 ft. e. of w. l. Stapleton,	107.50			241	2.30					241	
Davis,	From w. l. Acushnet ave. to Creek. (Not completed.)	9,034.00			2,076	11.05	800		1,537		539	
Field,	From Babbitt to 88 ft. n. of Stowell,	827.73	413.87	2.07	400	11.19		400				
First, No. 5,	From Grinnell south 259.50 ft.	242.32	121.16	.86	280.5	6.46	3.1	280.5				
Market and Pleasant,	(Not completed)—Laid in 1893 from William to 4 ft. e. of w. l. Pleasant at centre Market,	1,141.82			210.2	16.12	30		210.2			
Myrtle, No. 1,	From Weld street sewer to 200 ft. s. of Weld,	459.27	229.64	2.00	228.8	11.94		228.8				
Myrtle, No. 2,	(Laid in 1892. Balance of cost),	75.48										
Nye,	From Belleville ave. to 5 ft. w. of e. line Acushnet ave.,	3,778.20	1,889.20	4.14	912	11.13	356	325	355	232		
Pope, No. 3,	From Acushnet ave. to river,	1,214.11		1.78	678.3	3.64						678.3
Second, No. 7,	From Cove street north 380 ft.,	289.95	144.98	.71	407.6	6.27	2.66	407.6				
Second, No. 8,	From Grinnell south 285.4 ft.,	320.88	160.44	1.04	306.4	6.23	4.36	306.4				
Union,*	From 5 ft. w. of e. l. Purchase to 4 ft. e. of w. l. Sixth,	7,458.50		13.40	556.5	15.75	526.4			481.7	74.8	
William,*	From 3 ft. e. of w. l. Acushnet ave. to w. l. Pleasant,	7,434.07		14.49	513	13.60	448.4			56	264	207
Wamsutta Mills Village,†	From Purchase west 807.6 ft.,	320.00			807.6	9.73		807.6				
Water, No. 10,	From Grinnell to 100 ft. n. of n. l. South,	213.86	106.93	.80	265.5	4.88		265.5				
		$36,779.10	$4,990.25		9,008.1							
BY GENERAL	SEWER APPROPRIATION.											
Dunbar,	From 283.30 ft. w. of Bolton road to 5 ft. w. of e. l. Dartmouth,	$5,514.74	$5,409.36	5.73	962.3	14.10	250.6	962.3				
Grape,	West of Oak. (Work done in 1892),	1,011.27										
Howland,	Dock. (Filling in),	2,126.38										
Pearl and Willis,	Outlet. (Filling over pipe),	48.24										
Sawyer,	East of Purchase. (Work done in 1892),	56.00										
Stapleton,†	Cove road to 100 ft. s. of Cove street,	345.09	258.99		380	3.50		380				
Swift,	From 216 ft. w. of Bolton r'd to 175 ft. w. of Hemlock st.,	1,300.46	1,245.95	2.43	535	11.28	43.7	535				
		$10,402.18	$6,914.20		1,877.3							
		$47,181.28	$11,904.45		10,885.4		2,759.6	5,641.4	2,484.2	769.7	1,118.8	885.3
										Reduce lineal measure for vertical pipe,	14	
											755.7	

*Lowered.
†Balance of cost, $1,301.33, included in the table of drains.
‡Total cost of Cove road Sewer, No. 3, and Stapleton street Sewer, $452.59.

Catch-Basins Built in 1893.

Street.	Location.	Cost.
Acushnet ave.,	Southwest corner Campbell,	$66.64
"	Southwest corner Pearl,	73.15
Ash,	Northwest corner Middle,	68.94
Belleville ave.,	Southwest corner Sawyer,	72.74
"	Southeast corner Sawyer,	71.11
"	Northeast corner Sawyer,	74.91
Blackmer,	Northeast corner First,	70.18
Bowditch,	West side 217.7 feet north of Weld,	67.49
Cedar,	Northeast corner Maxfield,	68.25
Coggeshall,	Northwest corner Mitchell,	93.90
County,	Northeast corner Rivet,	74.04
Cove,	Southwest corner Salisbury,	80.84
"	Southwest corner Viall,	90.57
"	Southwest corner McGurk,	69.38
"	Northwest corner Harbor,	72.98
Division,	South side 399.2 feet west of County,	68.97
Elm,	Northwest corner Purchase,	78.52
Front,	West side, between Wamsutta and Logan,	43.97
"	East side at north line of Logan,	72.99
Hawthorn,	Northwest corner Rotch avenue,	79.52
Hillman,	Southwest corner Acushnet avenue,	81.81
Howland,	North side, 2.2 feet west of Front,	69.18
Kempton,	Southwest corner Acushnet avenue,	83.18
Maxfield,	Southwest corner Acushnet avenue,	75.56
"	Southwest corner Pleasant,	82.18
"	Southwest corner Summer,	73.07
"	Southeast corner Cottage,	73.87
"	Northeast corner Cottage,	77.16
"	Northeast corner Spruce,	65.47
Mill,	Southwest corner Acushnet avenue,	82.18
North,	Southwest corner Acushnet avenue,	78.15
"	Northwest corner Pleasant,	80.81
Pleasant,	Southwest corner Pope,	83.72
"	Southwest corner Merrimac,	70.65
"	Northwest corner Merrimac,	69.22
"	Southwest corner Franklin,	70.25
"	Southwest corner Hazard,	69.96
Pope,	Southeast corner Chestnut,	67.19
Purchase,	Southwest corner Elm,	80.00
Shawmut ave.,	West side 418.8 feet north of Durfee,	73 21
Smith,	Southwest corner Summer,	68.35
Union,	Northeast corner Park,	66.37
"	Northwest corner Park,	67.96
		$3,168.59

Total number, 43. Average cost, $73.69.

Catch-Basins Repaired.

Street.	Location.	Cost.
Austin,	Southwest corner County,	$14.38
Cannon,	South side, west of Walnut,	9.00
Clinton,	Northwest corner Orchard,	2.74
Cottage,	Southwest corner Parker,	6.17
County,	West side at Walnut,	11.35
"	Northeast corner Walnut,	7.59
Summer,	Southwest corner Willis,	2.21
	Sundry small repairs,	201.65
		$255.09

Catch-Basins Discontinued.

Street.	Location.	Cost.
Summer,	West side, 5 feet north of Sycamore,	. . . . . $2.95
"	West side, 9 feet south of Smith,	Cost with new basin.

Eyeholes Built in 1893.

Street.	Location.	Cost.
Acushnet ave.,	West side, 271.8 feet north of angle bound No. 21,	$9.44
Front.	Northwest corner Grinnell,	23.75
"	Northeast corner Grinnell,	21.33
"	East side, 67.7 feet south of Howland,	20.87
"	East side, 278.8 feet south of south line of Logan,	18.98
Howland,	Northwest corner Prospect,	19.78
"	Southwest corner Prospect,	22.36
Pleasant,*	West side in Common,	4.09
Weld,	West side, 47 feet west of Bowditch,	25.17
		$165.77

Total number, 9. Average cost, $23.45

*Cost of Labor given under Parks and Squares.

Eyeholes Repaired.

Sundry small repairs, ... $45.29

Culverts and Surface Drains, New.

Street.	Location.		Length Feet.	Size Pipe.	Cost.
Acushnet ave.,	North of Lund's corner,			24-inch,	$209.75
"	At first angle south of Howard avenue,		104	24 "	203.54
"	North of Wamsutta street,			10 "	18.73
Allen,	West of Page,		54.5	10 "	30.53
Belleville ave.,	About 456 ft. south of Main diagonally across,	Single,	225	8 "	94.70
Coffin ave.,*	171.70 feet west of Riverside avenue,		71		16.29
Front,	East side, between Wamsutta and Logan,			10 "	11.00
"	45.90 feet north of Sawyer,	Single,	50.9	24 "	77.66
Hathaway road,	172.10 feet west of Mt. Pleasant.	Single,	40.5	10 "	22.00
Pleasant,	About 72.5 feet south of William,	Single,	20.0	8 "	10.48
River road,	From north line to south line of Howard ave.,	Single.	134.0	8 "	20.05
Rockdale ave.,	East of Dartmouth street,	Double,	87.4	24 "	201.83
Weaver.	65.8 feet east of east line of Field.		49	18 "	28.30
					$944.86

*Wood.

Repaired.

Acushnet avenue,	South of Howard avenue,	$52.00
West French avenue,	South of Cove road,	31.26
	Sundry small repairs,	22.91
		$106.17

Discontinued.

Front,	55.7 feet north of Sawyer,	18-inch pipe.

Manholes on Old Sewers. New.

Street.	Location.	Cost.
Front,	Between Wamsutta and Logan,	$16.17
Mill,	At Cedar,	20.32
Purchase,	6.30 feet south of north line of Sawyer,	28.99
Smith,	East of Cedar,	23.32
		$88.80

Manhole Repaired.

Elm, ... 5 feet west of east line Purchase, ... $20.81

Manhole Discontinued.

Union, ... 8 feet west of the east line of Sixth, ...

Sewers Repaired.

	Cost.
County street sewer,	$3.44
Hillman street sewer,	10.80
Prospect street sewer,	29.79
Tremont street sewer,	95.99
	$140.02

RECAPITULATION.

GROSS EXPENDITURE, GENERAL SEWERS.

ACCOUNTS AS PER TABLES.

Catch-basins built,	$3,168.59
Catch-basins repaired,	255.09
Catch-basins, discontinued,	2.95
Manholes built on old sewers,	88.80
Manholes repaired,	20.81
Eyeholes built,	211.06
Eyeholes repaired,	45.29
Culverts and surface drains built,	944.86
Culverts and surface drains repaired,	106.17
Filling over Pearl and Willis streets sewer extension,	48.24
Sewer construction,	1,313.26
Howland street dock, filling in,	2,126.38
Sewers repaired,	140.02

ACCOUNTS NOT INCLUDED IN TABLES.

Tools, new and repaired,	768.58
Catch-basins cleaned,	2,358.50
Eyeholes and culverts cleaned,	27.55
Carting stock to city yard,	170.24
Teaming,	126.33
Tool houses repaired,	9.99
Flushing and puddling sewers,	162.03
Repairs to steam drills,	1,254.20
Repairs to steam pump,	93.96
Figuring sewer assessments,	125.00
Canvas,	202.83
Pails, dippers, oil cans, kerosene oil, freight,	97.89
Rubber boots,	21.00
Labor, handling stock at city yard,	7.67
Steam hose and couplings,	165.00
Blasting brush, explosives, marline, and lumber,	200.71
Contracts and specifications for building sewers,	97.92
Two new steam drills,	720.34
Diaphragm pumps repaired,	170.04
Boilers repaired,	327.85
Hoisting engine repaired,	50.93
Branches in old sewers,	2.61
Stock furnished highways and streets,	2,111.94
Stock furnished sundry persons,	26.00
Stock furnished parks and squares,	46.60

Stock furnished sundry sewers,	$4,246.45	
Stock furnished N. B. Water Works,	32.88	
Stock furnished N. B. School Dept.,	3.51	
General repairs,	442.60	
Stock on hand, January 1, 1894,	4,682.16	$27,224.83
Cr.		
Appropriation,	6,125.00	
Special appropriation,	5,237.56	
Received for stock,	6,758.87	
Stock on hand, January 1, 1893,	6,590.46	
Pay Roll, No. 52, approved, but not audited, to be paid from appropriation of 1894,	39.30	
Transfer to balance,	2,473.64	$27,224.83

NET EXPENDITURE, GENERAL SEWERS.

Appropriation,	$11,362.56	
Transfer to balance,	2,473.64	$13,836.20

NEW SEWERS.

Dr.		
Sundry sewers built,	$36,779.10	
Transferred to unappropriated funds,	7,635.42	$44,414.52
Cr.		
Sundry appropriations,	35,933.11	
Balance from last year,	8,795.17	
Pay-roll, No. 52, approved but not audited, to be paid from appropriation of 1894,	329.04	
		$45,057.32
Expended,		44,414.52
		$642.80
Market and Pleasant street sewers, balance carried forward,		1,358.18
Transfer to balance.		$715.38

SEWER DEPARTMENT.

INVENTORY OF STOCK AND TOOLS, JANUARY 1, 1894.

19 axes,	$14.25
1 bit and stock,	1.50
300 brick,	1.50
4 blasting batteries,	20.00
15 iron bars,	15.00
6 mortar boxes,	9.00
6 large blocks and falls,	50.00
8 small blocks and falls,	40.00
1 brick cleaner,	.25
3 cap crumpers,	1.00
300 pounds old canvas,	30.00
23 pounds common cement,	24.00
1 chest for dynamite,	2.00
6 sets eyehole castings,	44.00
63 iron catch-basin covers,	106.00
54 manhole castings,	402.00
2 5-gallon oil cans,	1.00
1 10-gallon oil can,	1.25
4 pounds Portland cement,	9.00
45 stone chains,	64.00
5 water casks,	20.00
11 boxes dynamite caps,	16.50
13 catch-basin covers, flagging 5 ft. by 5 ft.,	95.00
1 catch-basin cover, granite,	20.00
1 common boom derrick,	250.00
295 blowing drills,	440.00
7 small derricks,	120.00
4 large derricks with winch,	120.00
7 pounds 70 per cent. dynamite,	1.89
10 dippers,	1.00
100 hand-drills,	15.00
2 long dippers,	1.00
75 4-feet wire exploders,	2.60
125 feet dynamite fuse,	.50
26 flag washstones, 5 ft. by 1 ft.,	32.00
6 pony forks,	1.50
6 brick hammers,	3.00
250 feet canvas hose,	25.00
3 claw hammers,	.75
9 drill hammers,	6.00
1 horse,	75.00
1 harness,	20.00

700 feet garden hose,	$60.00
11 mortar hoes,	5.00
4 pairs pipe hooks,	8.00
8 street horses,	2.80
50 striking hammers,	94.00
2 tool houses,	135.00
142 feet suction hose, diaphragm pump,	213.00
4 jack screws,	14.00
9 small ladders,	7.00
75 lanterns,	37.50
2 marking lines,	2.00
6 spirit levels,	9.00
5 balls marline,	1.25
3,240 feet oak plank catch-basin covers,	243.00
11 dirt pounders,	5.20
6 grade poles,	3.00
269 picks,	269.00
21,000 feet 2-inch plank,	150.00
5 diaphragm pumps,	130.00
3 reels for connecting wire,	12.00
64 lantern rods,	9.00
4 rolls, 4 ft. long, 5 in. diameter,	4.00
6 rolls, 4 ft. long, 6 in. diameter,	6.00
3 rolls, 4 ft, long, 7 in. diameter,	3.00
4 small reducers,	6.00
4 large reducers,	9.00
1 coil 3-inch rope,	15.00
30 tons brick sand,	30.00
10 8-ft. dimension stones, 10 in. by 12 in.,	30.00
12 8-ft. dimension stones, 2 ft. by 1 ft.,	91.00
1 10-ft. dimension stone, 15 in. by 15 in.,	4.00
1 9-ft. dimension stone, 18 in, by 7 in.,	3.00
12 handsaws,	6.00
3 marlin spikes,	.75
6 pony shovels,	.60
11 L. H. R. P. shovels,	5.50
15 L. H. S. P. shovels,	7.50
271 S. H. R. P. shovels,	40.00
24 S. H. S. P. shovels,	12.00
1 iron square,	.75
21 stone sledges,	44.00
24,000 feet timber, 4 in. by 4 in., 4 in. by 6 in., 8 in. by 8 in.,	200.00
25 tag ropes and hooks,	6.00
7 brick trowels,	1.75

4 coils leading wire,	$2.00	
1 express wagon,	125.00	
9 hose wrenches,	4.50	
2 hydrant wrenches,	3.00	
6 monkey wrenches,	3.00	
1 wheel-barrow,	1.00	
25 pieces 5 in. bends,	5.74	
21 pieces 6 in. bends,	6.24	
24 pieces 8 in. bends,	11.66	
17 pieces 10 in. bends,	12.62	
1 piece 15 in. bend,	1.28	
1,418 pieces 5 in. straight vitrified pipe,	191.43	
1,856 pieces 6 in. straight vitrified pipe,	300.67	
59 pieces 8 in. straight vitrified pipe,	14.34	
1,472 pieces 10 in. straight vitrified pipe, 2 feet long,	95.82	
76 pieces 10 in. straight vitrified pipe, 3 feet long,	40.01	
273 pieces 12 in. straight vitrified pipe, 2 feet long,	125.31	
129 pieces 12 in. straight vitrified pipe, 3 feet long,	88.82	
91 pieces 18 in. straight vitrified pipe, 2 feet long,	83.54	
162 pieces 18 in. straight vitrified pipe, 2½ feet long,	185.90	
65 pieces 24 in. straight vitrified pipe, 2 feet long,	114.08	
82 pieces 24 in. straight vitrified pipe, 2½ feet long,	179.89	
598 pieces 6 in. stoppers,	16.15	
18 pieces 6 inch on 6 inch branches, 1 foot long,	5.10	
85 pieces 6 inch on 8 inch branches,	46.59	
415 pieces 6 inch on 10 inch branches,	328.31	
35 pieces 10 inch on 10 inch branches,	27.69	
230 pieces 6 inch on 12 inch branches,	237.84	
40 pieces 10 inch on 12 inch branches,	41.36	
634 pieces 15 inch straight vitrified pipe, 2 feet long,	427.95	
49 pieces 15 inch straight vitrified pipe, 3 feet long,	49.61	
375 pieces 6 inch on 15 inch branches,	570.04	
78 pieces 10 inch on 15 inch branches,	118.57	
13 pieces 12 inch on 15 inch branches, 3 feet long,	24.15	
107 pieces 6 inch on 18 inch branches,	221.00	
8 pieces 10 inch on 18 inch branches,	16.52	
17 pieces 12 inch on 18 inch branches,	35.11	
10 pieces 15 inch on 18 inch branches, 3 feet long,	25.25	
52 pieces 6 inch on 24 inch branches,	205.41	
1 piece 10 inch on 24 inch branches,	3.95	
2 pieces 15 inch on 24 inch branches, 3 feet long,	5.05	
2 pieces 18 inch on 24 inch branches, 3 feet long,	5.05	$8,050.68

HOISTING ENGINE AND BOILER.

1 bar, slice,	$1.00	
2 oil cans, tin,	.50	
1 tool chest,	3.50	
1 cleaner, tube,	1.25	
1 cask, water,	7.00	
3 cold chisels,	.75	
1 10 in. screw driver,	.25	
1 hoisting engine and boiler,	900.00	
1 12 in. flat bastard file,	.50	
1 12 in. ½ square bastard file,	.50	
1 4 in. gong,	1.50	
1 hoe,	1.00	
1 hammer, machinery,	1.00	
1 poker,	1.00	
275 feet ⅜ in. wire rope,	18.15	
200 feet ½ in. wire rope,	14.30	
4 steel tubs,	9.57	
1 1 in. valve,	2.00	
2 12 in. wrenches, monkey,	.65	
1 18 in. wrench,	1.00	
1 12 in. wrench, Stilson,	1.50	
3 wrenches, flat,	.75	$967.67

STEAM PUMP.

1 tool chest,	$3.50	
1 tin oil can,	.15	
16 feet 4 in. rubber hose,	16.00	
1 steam pump, mounted,	450.00	
1 12 in. monkey wrench,	.65	
3 flat wrenches,	.75	$471.05

PORTABLE BOILERS.

5 upright portable boilers,	$1,651.00	
5 slice bars,	5.00	
1 tool chest, (poor)	.50	
3 water casks,	21.00	
5 hoes,	5.00	
5 pokers,	5.00	
1 12 in. monkey wrench,	.75	$1,688.25

STEAM DRILLS.

1 chest, tool,	$3.50	
7 cans, small tin, oil,	1.00	
1 drill, steam, Rand,	125.00	

6 drills, steam, Ingersoll D 24, 1 drill, steam, Ingersoll E 24,	$1,498.00	
370 feet hose, 1-inch steam, old,	55.50	
200 feet hose, 1-inch steam, new,	144.00	
75 feet hose, ¾-inch steam, old,	15.00	
25 feet hose, ¾-inch steam, new,	15.00	
50 feet pipe, 1¼-inch spare exhaust,	3.00	
17 wrenches, flat,	8.50	
3 wrenches, 12-inch monkey,	1.75	
1 wrench, 18-inch monkey,	1.25	
3 wrenches, 18-inch Stilson,	6.75	
4 wrenches, steam hose,	1.00	$1,879.25

STEAM DRILL RENEWALS IN MACHINE SHOP.

9 bushings, piston,	$18.00	
3 glands, split,	7.50	
10 keys, round,	10.00	
9 sets rings and springs, piston,	10.80	
11 washers, rotating,	13.75	
6 washers, valve,	1.20	
6 screws, thumb,	.60	
3 tripod legs,	15.00	
8 feed nuts, Ingersoll D 24,	24.00	
2 feed screws, Ingersoll, new D 24,	60.00	
2 feed screws, Ingersoll, old D 24,	10.00	
6 side bolts, Rand drill,	1.50	
2 standards, Ingersoll D 24,	7.00	
1 cylinder, bare, Ingersoll E 24,	32.00	
2 feed screw handles, D 24,	3.00	
34 U bolts,	27.00	241.35
		$2,120.60

NEW BEDFORD & FAIRHAVEN BRIDGE.

Cobble paving repaired,	$104.56
Repairing wall,	292.14
Salaries of draw tender and assistant,	1,120.00
Painting and repairs to woodwork,	397.91
Brooms and brushes,	7.50
Salt,	3.80
Coal,	12.15
Oil,	1.00
Manilla and brick trowels,	3.82
Moving snow,	7.00
	$1,949.88

CREDITS.

Appropriation,	$2,062.50
Pay-roll No. 52, to be paid from appropriation of 1894,	10.00
Total receipts,	$2,052.50
Total outlay,	1,949.88
Transfer to balance,	$122.62

PARKS AND SQUARES.

Dr.

COMMON.

Labor, care of Common,	$546.00	
Repairing and sharpening lawn mowers,	51.08	
Painting and repairing settees,	79.15	
New ensign,	30.50	
Salt used in gutters,	6.25	
Snow shovels,	2.20	
Repairing pump,	5.09	
Brooms and hoe,	1.35	
Building eyehole,	4.00	$725.62

CITY HALL SQUARE.

Labor, care of square,	$14.41	
Painting and repairing settees,	97.35	$111.76

CLARKS POINT PARK.

Labor, building manholes,	$39.00	
Stock, building manholes,	33.51	
Labor, grading,	1,267.05	
Carting,	59.31	
Labor, building wall,	1,398.08	
Moving stone for wall,	169.96	
Use of engine on derrick,	274.00	
Labor, machinist,	22.92	
Rope,	46.90	
Sharpening and repairing tools,	89.41	
Tarred hemp, manilla and cop waste,	136.33	
New tools,	13.88	
Coal, oil and oatmeal,	52.90	
Repairing settees,	1.39	$3,604.64

BROOKLAWN PARK.

Labor, care of Park,	$485.33	
Screening driveways and walks,	233.08	
Commission for sale of grass,	15.80	
Painting settees,	155.20	
Trimming trees,	12.32	
Pipe, cement and carting,	17.21	
Covering culvert,	5.13	
Coal,	35.50	
New tools,	7.86	
Cutting gate stone,	.86	
Grass seed,	.75	$969.04

GROVE SCHOOL PARK.

Sewer assessment,	$106.08	
Painting settees,	101.89	
Labor, repairing settees,	12.50	
Cedar stubs and carting,	37.35	$257.82

PINE GROVE PARK, EAST FRENCH AVENUE.

Loading and carting settees,	$5.83	
Repairing settees,	23.59	$29.42

WEST END PARK.

Advertising buildings for sale,	$6.34	
Advertising grass for sale,	2.31	
Commission on sale of buildings and grass,	13.50	$22.15

RECAPITULATION.

City Hall square,	$111.76	
Clarks Point park,	3,604.64	
Common,	725.62	
Grove School park,	257.82	
Brooklawn park,	969.04	
Pine Grove park,	29.42	
West End park,	22.15	
Stock and labor to highways and streets,	12.77	
Stock and labor to N. B. & F. bridge,	1.57	$5,734.79

CREDITS.

Brought forward from 1892,	$7,318.68
Credits,	267.89
Pay-roll No. 52, approved but not audited to be paid from appropriation of 1894,	28.03
	$7,614.60
Expended,	5,734.79
Carried to 1894 account,	$1,879.81

ENGINEERING DEPARTMENT.

FROM JANUARY 1, 1893, TO MAY 13, 1893.

DR.

Office expenses,	$201.24	
Record of drains entered,	49.50	
Record of new work,	13.58	
Record of grades,	1.36	
Record of sewers,	57.85	
Plans of catch-basins, eyeholes, culverts, etc.,	18.99	
Grades for property owners,	44.56	
Defining street lines,	14.00	
Copying plans of street layouts,	118.55	
Layouts of new streets,	23.80	
Corrections and additions to section plans,	2.72	
Report for 1892,	189.59	
Repairs of instruments, tapes, etc.,	6.60	
Numbering streets,	14.14	
Court cases,	5.25	
Car tickets,	50.00	
New instruments, tapes, etc.,	27.30	
New grades established,	10.11	
Plans of contemplated bridge,	22.01	
Soundings for contemplated bridge,	17.19	
Sundry small sewer items,	39.26	
Miscellaneous,	10.22	
Work done for sundry persons,	2.12	
Work done for cemeteries,	1.80	
Work done for highways and streets,	91.91	
Work done for general sewers,	8.88	
Coffin avenue sewer plans,	4.82	$1,047.35

CR.

Received for labor,	$7.08	
Transfer from incidentals to balance,	1,040.27	$1,047.35

LAYOUT AND ACCEPTANCE OF SEARS COURT FROM PURCHASE TO PLEASANT.

Appropriation, (carried forward to 1894,)	$1,000.00

In Board of Aldermen,
July 26, 1894.

Received, ordered printed in the City Documents, and sent down for concurrence.

D. B. LEONARD,
City Clerk.

In Common Council,
8 mo., 20, 1894.

Concurred,

WM. A. MACKIE,
Clerk.

1893—CITY DOCUMENT NO. 11.

FIRST ANNUAL REPORT

OF THE

ENGINEERING DEPARTMENT

OF THE

CITY OF NEW BEDFORD

TO THE

CITY COUNCIL

BY THE

CITY LAND SURVEYOR

FOR THE YEAR 1893.

NEW BEDFORD:
EVENING JOURNAL COMPANY, PRINTERS TO THE CITY.
1894.

REPORT.

ENGINEERING DEPARTMENT
AND OFFICE OF CITY LAND SURVEYOR,
New Bedford, Mass., January 31, 1894.

To the City Council of the City of New Bedford:

GENTLEMEN,—In compliance with Section 5 of An Ordinance Defining the Duties of the City Land Surveyor, the following report of the expenses and operations of the Engineering Department for the year 1893 is respectfully submitted.

The expenditures and receipts for the year have been as follows:

EXPENDITURES.

Salaries and pay-rolls,	$4,171.71
Rent, janitor and lights,	606.05
Drawing supplies,	49.28
Stationery and printing,	42.22
Repairs to tapes, instruments, etc.,	26.27
New instruments and fixtures,	43.68
Car tickets of Union Street Railway,	125.00
Sundry grades of A. B. Drake,	33.50
Sundry supplies,	21.17
Telephone,	31.01
Twenty-three bound stones, carting and setting,	50.19
Stakes,	8.18
Horse hire,	15.50
	$5,223.76

RECEIPTS.

From special appropriations,	$5,000.00
From cash credits,	140.12
From transfer to balance,	83.64
	$5,223.76

Included in the item of "salaries and pay-rolls" is the sum of $219.35, being one-third of the salary of A. B. Drake, Superintendent of Public Works, up to April 13, 1893, which prior to this date it had been customary to charge to the Engineering Department. Deducting this, we have $3,952.36 as the cost of the working force of the department, for which 11,808 hours of services were rendered, distributed as follows:

DISTRIBUTION OF SALARIES AND TIME FOR THE YEAR 1893.

	Hours.	Cost.
Office work, entering orders, cleaning tapes and instruments, laying out and directing work, giving information, etc.,	900	$301.25
Scrap-book, i. e., posting newspaper clippings,	203	67.95
Report for 1892, compiling information for same,	455	152.29
Department of Public Works, special work,	283	94.73
Cemeteries, surveys, levels, plans, etc., made for same,	189	63.27
Street department, grades and lines for setting curbing, grading streets, laying gutters,	442	147.95
Private parties, grades for buildings, steps, curbing and line walls,	360	120.49
Establishing grades, taking levels, making plans and calculations,	544	182.09
Water Works Department, for grades furnished and levels taken,	158	52.88
Grades given and levels taken for laying drains,	118	39.49
Grades and lines given and levels taken for public buildings,	167	55.89
For construction of sewers, grade and line given, levels and measurements taken, plans and calculations made,	588	196.82
Copying plans of street layouts, etc.,	623	208.54
Record of drains laid,	667	223.25
Measurements, record, calculations, etc., of all "new work,"	973	325.68

Layouts of streets, surveys, levels, plans, searching records, making return of layout, etc.,	1,909	$638.98
Record of sewers, i. e., plans on sheets and in book,	921	308.28
Sewer assessment, plans of sewers built in 1892,	162	54.23
Sewer assessment, plans of sewers built in 1893,	191	63.94
Plans and surveys of New Bedford and Fairhaven bridge,	160	53.55
Measurements and plans of catch basins,	143	47.87
Correcting section plans,	73	24.44
Indexing plans and note-books,	443	148.28
Numbering streets and giving numbers to houses,	147	49.20
Correcting maps in office of Public Works and City Stable,	92	30.79
Map, plans, surveys, information, etc., for other departments,	340	113.80
Surveys, plans, levels, etc., for special report on grade crossings,	373	124.85
Lines, grades, levels and plans for Union Street Railway,	117	39.16
Surveys for private parties,	67	22.42
	11,808	$3,952.36

At the present time the office force consists of the City Land Surveyor and four assistants. Three of the assistants are in the nature of apprentices and have held their positions for periods varying from six months to two years. Their pay is not large, this fact being offset by the permanency of their positions in connection with the professional knowledge gained, which in time must command the recognition it will deserve. The fourth assistant is a draughtsman, and naturally commands more salary, but is not by any means over-paid. The office is well equipped with draughting tables, drawers for plans, instruments, a card index, etc., for which great credit is due to Mr. A. B. Drake, my predecessor. Perhaps the most glaring defect in the equipment is the lack of a fire-proof vault for storing plans and notes. While this situation is no different than it has been during the past, and has been strongly commented upon in the past reports of the Board of Public Works, I think the danger, or at least the loss in case of fire, may be

partially removed by storing in some fire-proof depository all of the original plans now in this department as custodian or owner, which have been copied. These original plans are rarely used, the copies being on bond paper, and indexed, are much more convenient for reference, and the originals might well be stored in a more safe place.

The following list gives under general heads the number of plans, mostly on bond paper, which were in the department at the time they were placed in my care, and the number added since that time:

	In Office.	Added.
Old town layouts of highways,	42	
Street layouts,	224	25
Street profiles,	46	9
Old plans and profiles,	77	13
Sewer plans,	69	40
Catch basin plans,	230	5
Plans of drains,	26	5
	714	97

During the winter months a large number of plans will be added to the above list, as for instance over 30 profiles of streets now on profile paper will be put on bond paper for greater convenience of reference. The book of sewer plans is very much behind; but with cessation of work in the field all of this work will be rapidly brought up to date. I might add here that in my opinion the most economical policy for the management of this department is the steady maintenance of a force sufficiently large to enable it to promptly supply all demands made upon it by other departments and individuals for information as provided by the ordinance, postponing to the winter months all office or inside work that can be so delayed without crippling the utility of the department. In this manner the office force becomes more nearly permanent, and consequently more thoroughly informed in the duties of the department. Of course there will be times when additional

help will be required for short periods; many times this can be avoided by the sincere co-operation of other departments in so planning their work as to give some preliminary notice of work projected, upon which information from this department will be needed. This is a department of information, and certainly no information requires more care or deliberation in its preparation than that which comes under the head of engineering. It is true that there will be times when work is projected upon very short notice, but in the majority of cases the executive heads of departments have advance knowledge of contemplated work. A brief memoranda to this department that they *may* want such and such information costs but a few words or a few written lines. This department can then prepare itself; if the desired information is not in the office, it is obtained, and when called upon there is no delay and very little probability of the information being in error. If never wanted, it is not a serious waste of time, it will come in use some day.

In taking up the work of the past year I will refer first to the indexing of the work by the use of the card index.

CARD INDEX.

This very admirable system of indexing the work of such an office, instituted by my predecessor, has now been brought to date. During the year all the street plans in the office, many miscellaneous plans, also all plans of sewers, streets and miscellaneous plans made during the year, and all note-books to date, have been indexed and put on the cards. This makes all plans and notes much more available for reference, besides reducing time in search, and the wear of plans by unnecessary handling.

STREET GRADES.

Two classes of grades are in use in the office. The established grade and the proposed grade. The first is prepared

by this office in the usual way, i. e., levels are taken on the street, a profile made, and a suitable grade line shown. This is then turned over to the Board of Public Works, a hearing ordered, the abutters notified, and later on the grade is accepted and thereby established, by a vote of the Board. The majority of established grades are created in connection with the acceptance of street layouts: the practice having been instituted in 1879 by R. C. P. Coggeshall, then City Land Surveyor, to show the profile and grade line in connection with the plan of street layouts. But few established grades had been created prior to this time. It is evident that this procedure is altogether too circuitous and slow to enable this department to promptly give the many grades they are called upon for. Therefore, the second case, or proposed grade, results. In this case the levels are taken as before, a profile made and a grade determined upon; this grade is then used, and is in every way the same as an established grade, except in point of law. For this reason such grades are not respected as they should be, and too many times are changed for reasons that do not counterbalance the damage done. I have endeavored to adhere strictly to all grades given by any of my predecessors, wherever those grades have been actually used. As I understand it, the private individual looses none of his rights in building in conformity to a proposed grade. If at a later period a different grade is formally established, he has a right to claim damages. On the other hand, if he applies for a grade, and one is given to him, although it be a proposed grade, if he refuses to build according to it, and later this grade is formally established, he has sacrificed his right to any damage that may result. To prevent as far as possible damages resulting from parties building in ignorance of a grade, the custom was established some time ago of giving grades free to all applicants. This is an established feature in most New England cities. Recognizing its merits, the ordinance defining the duties of the City Land

Surveyor provides that he may furnish line and grade to persons about to build, and also that "he may in connection with the Inspector of Buildings, make such rules and regulations in relation to the furnishing of this information as may seem to them proper."

While it is not intended to force any person to build in accordance with a proposed grade, especially where it is on a contemplated street, it is intended to give the person no excuse for not knowing where the grade is proposed to come, and also to have for future reference undisputed evidence of this fact.

In regard to giving the line of the street, I consider this sufficiently important to justify the city in furnishing it gratuitous. It is not intended that these marks will be given in such a way as to locate a person's corners, but merely to define enough of the line of the street to give him no excuse for building over it.

Tables following show for the year 1893 the streets upon which grades have been established formally, streets upon which a proposed grade has been shown and used, and streets upon which levels have been run, but no grade fixed or used. I have also collected in another table a list of all streets which have a grade, either proposed or established, on record in this office. Also a table of miscellaneous purposes for which grades were given during the year.

On the question of raising the grade of many of the low streets in the city, much can be said in favor of it. My own opinion, from an engineering standpoint, is to favor the careful investigation of all such cases by this department. After running levels and making complete plans of each case, showing the proper grade from our standpoint, it should then be turned over with a report to the Board of Public Works to be judged by them on the ground of public necessity and cost.

STREET LAYOUTS.

The number of street layouts made by this department since I assumed charge are given in tables under their proper headings. I will state that under the ordinance all of the notes

taken in connection with this work, as in all other work of the department, is the property of the city. On all layouts or widenings, in addition to the work in the field, the titles of the abutters are looked up in the registry. A plan on white bond paper is made for this department, a tracing with a list of the abutters, and a written return of the survey is then given to the Board of Public Works.

I would suggest that it would be less embarrassing to this department, and no serious harm to any other interest, if the order for a hearing upon a street layout should be withheld until the Board of Public Works has received the survey of the street. Cases where this rule should not apply may arise: at such times this department will no doubt make the most of the time allowed it, but in this work, as in any other, undue haste is conducive to error.

I understand that in the past the Board of Public Works has projected streets through the property of individuals when so requested, without cost to the individual. Following this custom I have defined the lines of one street, and have indicated upon all street layouts, made the lines of contemplated streets intersecting the same, as far as known. I approve of the custom referred to because it will result in the layout of new streets, with particular regard to their connection with existing streets, thereby improving the looks as well as the utility of our streets.

SEWERS.

On all sewers constructed in 1893 this department has furnished grades, taken the location of branches, made measurements so as to determine the amount of cut, whether in dirt or ledge, and noted any other information that might prove of value in the future. This has all been tabulated and will be found with the other tables.

There are probably no sewers constructed in the city that do not involve a certain amount of engineering: at the same time I think it is no depreciation of the value of these services to say that in the majority of the requests for sewers that come before the city authorities the questions involved are more those of public necessity and cost than of engineering. But it undoubtedly would be of great assistance in the determination of these questions, and in perfect harmony with the purpose of the engineering department, if it were called upon, in the case of every proposed sewer, to furnish plans giving all the information obtainable.

The plans of sewers built in 1893, as well as of those built in 1892, are nearly completed. These plans give very complete information concerning the sewers. Branches are all shown and measurements given, so that when wanted for the purpose of connecting a drain with the sewer they can be readily located on the ground. Depth of sewer, grade of same, size of pipe, man-holes, ledge, if any, and connection with other sewers, is all shown on the plan.

RECORD OF DRAINS LAID.

The department has pursued the course of previous years in its relation to the laying of drains. The procedure is as follows: Upon the issue of a permit by the Public Works to enter a sewer, the foreman's order comes to this department. The assistant in charge of that work takes it and endorses upon it "branch" or "no branch," according to whether the sewer which is to be entered by the proposed drain has a branch convenient for use by this drain or not. In the former case the location of the branch is given so that the foreman can find it, or its position is shown on the ground. After the drain is laid, the assistant from the department measures its location with reference to known points or lines. It is then posted on the index card specially provided for drains. During

the year this information has been furnished and a record made:

	For 440 drains laid.	
	58 drains repaired and re-laid.	
	125 drains cleared.	
Total,	623	
	1 discontinued.	
	150 branches given for drains.	

NEW WORK.

Under this head is included the measuring of the work of the street department, such as new macadam, repairing same, laying gutters, setting curbing, laying concrete, setting flagging, laying paving, cross-walks, etc. The calculations involved in determining the amounts of such work is also performed by this department, the results are entered under their respective heads in a book kept for this purpose. As tables of this work will appear in the Report of Public Works, it is not necessary to include them in this report.

STREETS NUMBERED.

The streets numbered per order of the Board of Public Works, with numbers furnished on these streets and on others numbered in previous years, appear in the table under this heading.

CEMETERIES.

Since April all of the surveying work for the cemeteries has been furnished by this department. At the present time there is quite a considerable amount of work very much needed to bring the plans of the cemeteries to date. I have intended to give this matter early attention.

BOARD OF HEALTH.

A large map of the city from a short distance north of the Nash road, south, was made for the Board the past fall. Upon it are shown the accepted streets, contemplated streets, sewers, man-holes, etc.

BOUND–STONES.

Twenty-three bound-stones were set during the year by this department. There is urgent need for setting quite a number of bound-stones to preserve the location of street lines where now they are only defined by cedar stubs, or by drill holes in stone walls.

PLATTING THE CITY.

During the past year the contract for completing the platting of the city was let to Messrs. Shedd and Sarle, civil engineers, of Worcester and Providence. Under this contract the plats of all that part of the city north of Allen, Wing and Howland streets, east of Rockdale avenue, south of Parker and Pearl streets and west of the Acushnet river will be turned over to the city May 1, 1894. At the present time the work is progressing so favorably that there can be little question but what the above section of the city will be completed on time. In order to comply with the terms of the specifications and contract the contractors have subdivided the work under the following four general divisions:

First. A very careful traverse survey of the entire section and the calculation by co-ordinates of the location of each principal point within this survey. This furnishes the best method for accurately platting the work, and provides a system for checking the subsequent work.

Second. A search of the records to determine the owner of record, with a description by deed of each lot of separate ownership. It is not intended that the contractors shall make

a search of the title; but in many cases a lot has to be traced back through a number of owners to find a description. From the description thus finally determined a plan of each plat on the same scale as the finished plats is made. The distances by deed are put on each lot in blue ink, later the measurements of each by the marks of actual occupation are shown in black ink. The other information given by the deeds can be found by reference to the note-book of the deed search, the number of this book and the page being given on the lot. These plats will show more lots than the finished plat, because in many instances what on the latter will be one lot may have been acquired in two or more separate purchases.

Third. The survey of each lot in the field and the calculation of the areas.

Fourth. The drafting of the final plats and the tabulation of such other material as called for by the contract.

All of the material acquired in the execution of the contract becomes the property of the city. The deed plans, notes, calculations, etc., going to the City Land Surveyor, the completed plats to the Assessors.

That this information will be of great value in the future goes without question.

GRADE CROSSINGS.

In November the City Council took up an investigation of the question of abolishing the grade crossings within the city.

As it was too late in the year to attempt an investigation of this subject in all of its phases and possibilities, it was deemed best to obtain a preliminary report upon the comparative cost and feasibility of the two general schemes of either the elevation of the railroads or the elevation of the streets. The scheme of depressing the railroad was not considered as feasible, inasmuch as it was entirely impractical south of Wamsutta street.

As nothing was known definitely regarding the probable cost of either of these schemes, it was considered of the greatest importance to get this information first. It was highly essential then to apply to some engineer whose experience in actual modern construction of this nature would enable him to make such a report, after a necessarily brief investigation of the situation here. To this effect Mr. John D. Fouquet, Civil Engineer, of New York City, was engaged. This gentleman's long experience as a civil engineer in connection with railroad construction, particularly his connection with the West Shore R. R. of New York, where many problems of this nature were met with, especially qualified him to make a report under the difficulties stated.

This department made such surveys and plans and ran such levels as were absolutely essential; but as less than two weeks were allowed for the collection of this information in connection with our regular department work, it is quite evident that we were not able to go outside of the two main discussions of the subject. For details of the report I refer you to the original, a copy of which is appended.

The plans and sketches connected with the report are on file in this office.

A MAP OF THE CITY.

At a meeting of the City Council held Sept. 28, 1893, the following order was passed:

"Ordered, That the City Land Surveyor be instructed to prepare a suitable map of the City of New Bedford, said map to be mounted, framed, and hung in the Council Chamber for the convenience of the members in deciding questions appertaining to streets, sewers, etc."

Owing to the pressure of other duties this order has not yet been complied with; but it is my intention to soon commence the preparation of the map.

Before closing my remarks upon the work of the department I wish to state that Mr. Henry H. Crapo has very kindly turned over to the office of City Land Surveyor the valuable collection of old plans and notes formerly the property of his grandfather, the Hon. Henry H. Crapo, most of them being the result of his work when City Land Surveyor. I propose to have these plans and notes carefully indexed, so that they may readily be available for reference.

I am in hopes that now that the City Land Surveyor is an official of the city, at the head of a distinct and separate department, other bequests of collection of notes and plans will be made to the office. No doubt there are many small collections of such plans whose owners will be glad to give them to the city in this way when they understand that they will be permanently preserved and can always be had for inspection.

While there is much more that can be written in connection with the work of this department for the past year, it is general more than special, and is in large part covered by the tables.

In looking ahead to the coming year there are many ways in which this department can prove its value as a very important member of the city's departments. I desire to call your attention to the following suggestions of the more important matters that should be turned over to this department for investigation and treatment, (in addition to the regular department work more or less dependent upon other departments), and which I have titled as

WORK AHEAD.

First. A systematic levelling of the city for the purpose of completing profiles of all the streets, and to establish bench marks with reference to one datum. As is well known, at the present time but few of the city's bench marks have been accurately referred to the established datum. This work will

necessitate the correction of grades and plans in the office, but when finally completed will be of great value.

Second. The drafting of a set of plats, duplicates of the Assessors' plats now being made, for use in this department on the layout of streets, sewers, for the making of sewer assessment plans, and for many other uses. While it is true that this office becomes the possessor of all notes and working plans, they should be preserved for record, and copies of the plats made for daily use as stated. By commencing this work immediately and following it up as fast as the contractors are through with their working plans, will extend the cost over a greater period, and yet put the department in a position to make an immediate use of some of the plats.

Third. A survey of all the public property, including the parks. The survey of the parks should be followed by a topographical survey of the north end (Brooklawn) and west end parks, this being a very necessary step to an intelligent improvement of the same. In fact, it should precede all improvement work.

Fourth. A continuation of the investigation of the question of abolishing grade crossings. With the report of Mr. Fouquet as a nucleus we might now commence a more detailed investigation of the subject. This is a matter entirely within the province and purpose of this department, and I trust the City Council will see its way clear to order a further study of the question.

Fifth. I have been informed by the Superintendent of Water Works that if the city continue the investigation started in regard to an increase of the city's water supply, he will require assistance from the engineering department in the making of surveys and the collection of necessary information for the purpose stated. This undoubtedly is in direct harmony with the purpose of this department, and I trust the Council will give it all the assistance in its power to enable it to place

and maintain itself in a position to comply with such requests.

Sixth. The Board of Health have already called attention to the question of the present disposal of the sewage of the city. I doubt if many of our citizens properly appreciate the importance of this question, and while it is altogether too intricate and important for full consideration in this report, I desire to call your attention to the fact that at the present time all of the sewage of the city is deposited in the Acushnet River or Clark's Cove at points so near the shore line, that in the case of several sewers the outlets have become very obnoxious. It cannot be long before this general emptying of the sewage so near the shore line will become, not only generally obnoxious, but a menace to the health of the city. I should urge a preliminary investigation at as early a date as possible, for the purpose of determining the best method of improving this situation.

In closing, I desire to acknowledge the loyal and intelligent work of my assistants in the department, also to tender my thanks to those citizens and members of other departments who have always kindly furnished any information asked for by the department.

Respectfully submitted,

W. F. WILLIAMS,
City Land Surveyor.

CITY OF NEW BEDFORD,

IN THE YEAR ONE THOUSAND EIGHT HUNDRED AND NINETY-THREE.

An Ordinance Defining the Duties of City Land Surveyor.

Be it ordained by the City Council of the City of New Bedford, as follows:

SECTION 1. The City Land Surveyor shall have charge of all matters relating to surveying and civil engineering in connection with the business of the city. His department shall be called the Engineering Department. He shall devote his whole time to the service of the city, and shall hold no other office under the city government or any department thereof. He shall receive in full compensation for his services such salary as the City Council may from time to time fix and determine.

SECTION 2. It shall be the duty of the City Land Surveyor to make and present such surveys, plans, delineations, statements, estimates, and reports in relation to the grading, laying out and altering of streets and sewers, and do such other work proper to be performed by a surveyor or civil engineer in relation to the business of the city as may be required by the Mayor, the City Council or either branch thereof, or any committee thereof, or of any department or board of the city. He shall make such corrections and changes in the Assessors' plats as may be required by the Board of Assessors. He shall keep a record alphabetically arranged of all highways in the city.

SECTION 3. The City Land Surveyor may furnish to persons about to build any structure within the city, the line and grade

of the street or streets adjacent to such structure, and may, in connection with the Inspector of Buildings, make such rules and regulations in relation to furnishing such information as may seem to them proper.

Section 4. All plans, delineations, estimates and reports, together with all field books, notes and other memoranda made by the City Land Surveyor or any of his assistants in connection with their official duties, shall be and remain the property of the city. And it shall be the duty of the City Land Surveyor to preserve the same properly classified and indexed.

Section 5. The City Land Surveyor shall annually in the month of January present to the City Council a report in relation to the Engineering Department, showing the number of persons employed, the detailed expenses of the department, and any general information in regard to the same that he may deem expedient.

Section 6. The City Land Surveyor may from time to time employ such assistants as he shall require in the performance of his duties with the consent and under the direction of the Joint Standing Committee on Roads, Bridges and Sewers, and may expend such sums for materials or incidental expenses as may be necessary; provided, however, that all such expenditures for the employment of assistants and for materials and other incidental expenses, and all contracts for the same, shall be limited to the amount actually appropriated by the City Council to the Engineering Department.

Section 7. All expenditures in connection with the Engineering Department shall be examined by and certified to by the City Land Surveyor, and approved by the Chairman of the Committee on Roads, Bridges and Sewers. The Committee of Audit shall not certify or approve any account of claim against the city for surveying or civil engineering work other than

those approved as above, unless the same are especially authorized by vote of the City Council, or provided for by some special appropriation.

Section 8. All ordinances or parts of ordinances inconsistent herewith are hereby repealed.

Section 9. This ordinance shall take effect upon its passage.

In Board of Aldermen, December 8, 1893.

Passed to be ordained.

J. C. BROCK, Mayor.

In Common Council, December 8, 1893.

Passed to be ordained.

SAMUEL C. HART, President.

Approved, December 9, 1893.

J. C. BROCK, Mayor.

A true copy. Attest:

DANIEL B. LEONARD, City Clerk.

Following is a List of Streets upon which Grades have been established by the Board of Public Works during the year.

Street.	Between what Points.	Length.
Beach,	Kempton St. to Maxfield St.,	1,009.36
Bonney,	Rivet St. to Cove Road,	1,559.08
Cotter,	Cedar Grove St. to Coggeshall St.,	378.40
Davis,	Acushnet Ave. to Church St.,	1,586.49
Davis,	Belleville Ave. to Acushnet River,	1,197.48
Front,	Howland St. to Grinnell St.,	533
Front,	Wamsutta St. to Logan St.,	1,008
Hillman,	Hunter St. to Rockdale Ave.,	786.14
Madison,	Acushnet Ave. to Fourth St.,	210
Maitland,	Richmond St. to Shawmut Ave.,	333.95
Market,	Pleasant St. to Sixth St.,	202
North,	Hunter St. to Rockdale Ave.,	744.15
North,	Newton St. to Florence St.,	1,247.58
Nye,	Acushnet Ave. to Belleville Ave.,	876.39
Pleasant,	W. side Union St. to Market St.,	183
Salisbury,	Cove St., north 657 feet,	657
Social,	Previous terminus to McGurk St.,	44
Stapleton,	Cove St. to Cove Road,	443.8
Shore,	Cove St. to cont. Grit St.,	424.30
Thompson,	Crapo St. to Bonney St.,	272.30
Thompson,	Bonney St. to Dartmouth St.,	1,698.04
Nash Road,	Acushnet Ave. to Church St.,	1,952
Mt. Pleasant,	S. line Coggeshall to north line Pasel's,	889.14
	Total length in feet,	18,235.60

Levels Were Run on the Following Streets, and a Proposed Grade Fixed, but Not Established.

Street.	Grade from	To	Length.	For what used.
Beetle,	Acushnet ave.,	Bowditch st.,	525	New houses.
Briggs,	Rivet st.,	Thompson st.,	436	A barn.
Church,	Nash Road,	A point north,	1,050	New houses.
Chancery,	North st.,	Hillman st.,	259	" "
Clinton,	Ash st.,	Chancery st.,	383	" "
Collet,	Acushnet ave.,	Belleville ave.,	1,360	" "
Dunbar,	Bolton Road,	Hemlock st.,	500	Cutting.
Fourth,	Madison st.,	A point south,	145	New School.
Foster,	Hillman st.,	Maxfield st.,	260	" House.
First,	Cove st.,	Division st.,	754	Private sewer.
Kempton,	Rockdale ave.,	Town Line,	3,000	U. Street R'y.
Maxfield,	Walden st.,	Thomas st.,	166	New house.
Morton Court,	Cove st.,	A point north,	502	Water Works.
Palmer,	Court st.,	Elm st.,	429	Cutting.
Pleasant,	Mill street,	Maxfield st.,	1,607	Curbing, etc.
Rounds,	Court st.,	Elm st.,	438	Cutting.
Riverside Ave.,	Coffin ave.,	Phillips ave.,	225	N. house, etc.
Rockdale Ave.,	Cove Road,	Dartmouth st.,	2,013	U. Street R'y.
Rockdale Ave.,	Kempton st.,	Maxfield st.,	1,100	New houses.
Sears Court,	Pleasant st.,	Purchase st.,	225	Grading.
Sisson,	Arnold st.,	Union st.,	601	New house.
Swift,	Bolton Road,	Dartmouth st.,	483	Sewer.
Tremont,	Arnold st.,	Union st.,	400	New house.
Tallman,	Acushnet ave.,	Bowditch st.,	613	" "
West Maxfield,	Park st.,	Rockdale ave.,	2,016	Grading street
Walden,	Maxfield st.,	Smith st.,	280	New house.
Total length in feet,			19,770	

LEVELS WERE RUN ON THE FOLLOWING STREETS AND PROFILES MADE; BUT NO FURTHER ACTION HAS BEEN TAKEN.

STREET.	GRADE FROM	TO	LENGTH OF LEVELS.	MADE AT REQUEST OF
Armour,	Union st.,	Arnold st.,	606.33	Board Public Works.
Ashland,	Cedar Grove st.	Coggeshall st.,	547	City Property Com.
Acushnet Ave.,	Pearl st.,	Wamsutta st.,	1,570	Supt. Public Works.
Bentley,	Acushnet ave.,	Bowditch st.,	469.92	Board Public Works.
Dover,	"	Second st.,	189	Private party.
Fifth,	Union st.,	Spring st.,	211	Board Public Works.
Hathaway Road	Mt. Pleasant st.	Shawmut ave.,	1,844	" " "
Merrimac,	Acushnet ave.,	Acushnet river,	650	Supt. " "
Mill,	Ash st.,	Park st.,	710.05	Board " "
"	Newton st.,	Florence st.,	1,012.75	" " "
"	Rockdale ave.,	Kempton st.,	574.80	" " "
Myrtle,	Peckham st.,	Coggeshall st.,	1,023	City Property Com.
Mill Road,	Main st.,	Acushnet ave.,	2,037	Private party.
Pope,	Acushnet ave.,	" river,	700	Supt. Public Works.
Second,	William st.,	Elm st.,	292	Private party.
Turner's Ct.,	Acushnet ave.,	O. C. R. R.,	255	Supt. Public Works.
Union,	Pleasant st.,	Sixth st.,	211	Board " "
William,	"	"	206	" " "
Rockdale Ave.,	Dartmouth st.,	Kempton st.,	8,344	For widening.
Total length in feet,			21,452.85	

MISCELLANEOUS GRADES FURNISHED.

For grading streets,	36	grades given.
Curbing and gutters,	50	" "
New Bedford Water Works,	50	" "
Laying drains,	39	" "
Union Street Railway,	9	" "
Catch basins and eye-holes,	11	" "
Construction of sewers,	63	" "
New schools and engine house,	6	" "
Cemetery lots and driveways,	5	" "
Bank walls,	1	" "
New buildings, steps, and line curbing,	174	" "

For purpose of locating branches to new sewers and for taking measurements of ledge encountered, 112 trips were made.

Miscellaneous information has been furnished for a large number of purposes, a few of the more important being:

Levels and profile of County road at Lund's Corner.
Soundings and profile of Bonney street from mouth of sewer to Cove road.
Cross section of Orchard street, Rivet street to Cove road; of Harbor street, Gifford street, to Cove street; of Gifford street, Harbor street, to the river, for determining the amount of fill made in each case.
Plan and measurements of railroad crossing at Weld street.
Measuring sea wall and drain around fort on government property at Clark's Point.
Survey of a piece of land on Myrtle street belonging to the city.
Defined lines of Seventh street, Spring to School, and of Pleasant street, William street, to Sears court.
Measured cargo of flagging stones (sidewalk.)
Profiles of streets for committee on city property.
Survey of school lot, Madison street and Fourth street.

NEW STREETS LAID OUT AND ACCEPTED.

Name.	From	To	40 feet wide.	50 feet wide.	80 feet wide.
Beach,	Kempton,	Maxfield,	1,009.36		
Bonney,	Rivet,	Cove Road,		1,559.08	
Cotter,	Cedar Grove,	Coggeshall,	378.4		
Davis,	Acushnet Avenue,	Church,		1,586.49	
Davis,	Belleville "	Acushnet River,		1,197.48	
Hillman,	Hunter,	Rockdale Avenue,		786.14	
Maitland,	2.34 feet east of Richmond,	Shawmut "	333.95		
North,	Hunter,	Rockdale "		744.15	
North,	Newton,	Florence,	1,247.58		
Nye,	Acushnet Avenue,	Belleville Avenue,		876.39	
Rockdale Avenue,	Cove Road,	Dartmouth,			1,960.64
Salisbury,	Cove,	South 657.20 feet,		657.20	
Social,	116 feet east of Harmony,	McGurk,		44.00	
Stapleton,	Cove,	Cove Road,		443.80	
Shore,	Cove,	South 424.30 feet,		424.30	
Thompson,	Crapo,	Bonney,	272.30		
Thompson,	Bonney,	Dartmouth,		1,698.04	
	Total lengths in feet,		3,241.59	10,017.07	1,960.64

STREET WIDENINGS LAID OUT AND ACCEPTED.

NAME.	FROM	TO	Feet in Length.	WIDENED FROM
Rockdale Avenue,	Allen,	Kempton,	3,973.23	50 to 80 feet.
Nash Road,	Acushnet Avenue,	Mount Pleasant,	3,875.85	40 to 50 feet.
Middle Point Road,	West French Avenue.	Government property,	7,413.71	40 to 80 feet.
	Total length in feet,		15,262.79	

STREET LINE RE-ESTABLISHED.

NAME.	FROM	TO	Feet in Length.	
Mount Pleasant,	Coggeshall,	North 889.14 feet,	889.14	

Total length in feet of new streets accepted, widenings accepted and lines re-established is 31,371.23 feet, equivalent to 5.941 miles.

New Street Lay-outs Made; But Not Accepted.

Name.	From	To	40 feet wide.	50 feet wide.
Armour,	Union,	Arnold,		606.33
Beetle,	Acushnet Ave.,	Bowditch,		525.16
Bentley,	Acushnet Ave.,	Bowditch,		469.92
Mill,	Ash,	Park,	710.05	
Mill,	Newton,	Florence,	1,012.75	
Mill,	Rockdale Ave.,	Kempton,		574.80
Total length in feet,			1,722.80	2,176.21

Lay-out of Widenings Not Accepted.

Name.	From	To	Length.	Widened from
Rockdale Ave.,	Dartmouth,	Allen,	4,641.76	50 to 80 ft.
Kempton,	Rockdale Ave.,	New Town Line,	2,962.00	40 to 80 ft.
Total length in feet,			7,603.76	

Total length of lay-outs and widenings not accepted, in feet, 11,502.77; equivalent in miles, 2.178.

Total length of lines run for lay-outs and widenings accepted and not accepted is 8.110 miles. This of course does not include any preliminary lines, offsets or other measurements necessary to the location of the lines returned.

Details of Sewers Constructed in 1893.

Location of Sewer.	Length and Sizes of Pipe.					Total length.	Greatest cut in feet.	Average cut in feet.	Greatest cut in ledge.	Average cut in ledge.	Cu. yds. of ledge.	Cu. yds. of earth.	Total Cu. yds. Excavated.	Man-holes built.	Pitch in feet per 100 feet.
	10-in.	12-in.	15-in.	18-in.	24-in.										
Bowditch St., No. 4.	438.7					438.7	11.8	11.18	9.8	3.25	160.3	474.5	634.8	1	0.50 and 1.157
Bullard St.	304.	382.				686.	13.22	9.45	8.94	5.59	134.16	708.6	842.8	1	0.50 and 2.92
Cove Road., No. 3.				241.		241.	2.55	2.30				76.1	76.1	1	0.50
Davis St. *		1537.		539.		2076.	17.82	11.05	16.16	7.09	800.	2256.5	3056.5	4	0.35, 2.56 and 4.01
Dunbar St.	962.3					962.3	16.35	14.10	8.63	2.81	250.6	1508.2	1758.8	1	1.96
Field St.	400.0					400.	12.02	11.19				580.	580.0	1	0.50
First St., No. 5.	280.5					280.5	6.74	6.46	2.00	2.00	3.1	231.7	234.8	1	0.50
Myrtle St., No. 1.	228.8					228.8	12.42	11.94				302.	302.	1	1.06
Nye St.	325.	355.	232.			912.	13.59	11.13	6.2	4.04	356.	953.	1309.	2	0.50, 2.68 and 3.72
Pleasant St.		210.2				210.2	16.39	16.12	3.0	1.3	30.	403.4	433.4	1	1.00
Pope St.					678.3	678.3	6.05	3.64				365.8	365.8		0.25
Second St., No. 7.	407.6					407.6	6.80	6.27	1.20	.80	2.66	304.5	307.2	1	0.50
Second St., No. 8.	306.4					306.4	6.45	6.23	1.65	1.23	4.36	241.4	245.7	1	0.50
Stapleton St.	380.					380.	4.9	3.5				197.	197.	1	0.50
Swift St.	535.					535.	13.3	11.28	4.4	2.66	43.7	738.5	782.3	1	2.08
Union St. (Lowered)			481.7	74.8		556.5	16.47	15.75	10.7	6.38	526.4	675.6	1202.	2	0.50, 4.40 and 3.75
Wamsutta Village.	807.6					807.6	15.82	9.73				1018.8	1018.8	5	
Water St.	265.5					265.	5.31	4.88				169.5	169.5	1	0.50
William St. (Lowered)			56.	306.	207.	513.	16.35	13.6	11.8	5.47	448.4	786.2	1234.6	3	0.50 and 2.77
	5641.9	2484.2	769.7	1104.8	885.3	10885.9					2759.6	11991.3	14751.1	29	

* 224 feet of pipe remained to be laid in 1894. About 320 cubic yards of ledge to be removed in 1894.

Street Numbers.

The following streets were ordered numbered by the Board of Public Works.

Name of Street.	From	To	Distance Allowed.	Numbers Given.
Arnold,	County,	James,	20 ft.	57
Grape,	Oak,	Rural,	20 ft.	18
Coffin avenue,	Acushnet river,	Purchase,	20 ft.	27
Belleville avenue,	Kilburn,	Davis,	15 ft.	43
Sherman,	County,	Crapo,	20 ft.	23
Orchard,	Cove Road,	Allen,	20 ft.	20
Atlantic,	Arnold,	Maple,	20 ft.	14
Morgan,	County,	Ash,	25 ft.	28
Pope,	County,	Chestnut,	20 ft.	4
Austin,	Purchase,	Shawmut,	20 ft.	73
Maitland,	Cedar,	"	20 ft.	9
Sawyer,	Harbor line,	County,	20 ft.	31
County,	Linden,	Sawyer,	20 ft.	41
Coggeshall,	Harbor line,	Acushnet ave.,	15 ft.	49
Reed,	Court,	Kempton,	20 ft.	9
Chestnut,	Parker,	North terminus,	20 ft.	12

Nineteen numbers were given to houses on streets where no special order was necessary.

LIST OF STREET GRADES.

On	Proposed Grade.		Established Grade.	
Name of St.	From St.	To St.	From St.	To St.
Acushnet ave.,	Hicks,	Washburn,	Division,	Blackmer.
	Washburn,	Cedar Grove.		
	Blackmer,	Potomska.		
	William,	Elm.		
	Walnut,	Spring.		
	Lund's Cor.,	Freetown.		
Adams,	County,	Ashland.		
Allen,	Cottage,	Rural.		
	Brigham,	Dartm'th line.		
Armour,	Arnold,	Union,	Union,	Court.
Arnold,	Ash,	Chancery,	Tremont,	Sisson.
	Park,	Tremont.		
Ashley,	Cove,	Ruth ave.		
Ash,	Grove,	Court,	Bedford,	Grove.
			Court,	Sycamore.
Ashland,			Durfee,	Clark.
Atlantic,			Maple,	Union.
Austin,	County,	Purchase,	Ashland,	Cedar.
	Cedar,	Shawmut ave.		
Babbitt,			Dartmouth,	Rural Cem.
Bay,	Cottage,	Columbia,	Columbia,	Ward.
Beacon ave.,	Ruth ave.,	E. French ave.		
Bedford,	Cottage,	Borden,	Borden,	Ash.
Beach,			Kempton,	Maxfield.
Beetle,	Acushnet ave.,	Bowditch;	Belleville ave.,	Acushnet ave.
Belleville ave.,			Washburn,	Main.
Bentley,	Acushnet ave.,	Bowditch.		
Blackburn,			Cedar Grove,	W. W. Reserv'r.
Blackmer,	Acushnet riv.,	Water,	Water,	County.
Bennett,	Coggeshall,	north.		
Bethel,			William,	Elm.
Bolton Road,	Rivet,	Fruit,	Rockdale ave.,	Rivet.
Bonney,	Rivet,	Grinnell,	Cove road,	"
Borden,	Dartmouth,	Bedford.		
Bourne,	Fruit,	Spooner.		
Briggs,	Rivet,	Thompson.		
Brigham,			Allen,	Hawthorn.
Bowditch,			Logan,	Nash road.
Brownell,			Arnold,	Court.
Bullock,			Willow,	Durfee.
Butler,			W. Fr. ave.,	M. Point road.
Bullard,			Belleville ave.,	Acushnet ave.
Bridge.				
Campbell,	Park,	Chestnut,	County,	Summer.
Cedar,	Smith,	Durfee.		
Cedar Grove,			Belleville ave.,	Reynolds.
Chancery,	Clinton,	Hillman,	Hawthorn,	Clinton.
Chestnut,	Hillman,	Maxfield,	Parker,	Locust.
	Smith,	Parker,	Locust,	north, 134 ft.
Church,	Nash road,	north 1050 ft.,	Coffin ave.,	Nash road.

LIST OF STREET GRADES.

On	Proposed Grade.		Established Grade.	
Name of St.	From St.	To St.	From St.	To St.
Clark,	State,	Reynolds,	Reynolds,	Mt. Pleasant.
Cherry,			Sixth,	County.
Clay,			Oak,	Ward.
Cleveland ave.,	Cove,	Ruth ave.		
Clinton,	Cottage,	Ash.		
Coffin,	Acushnet riv.,	Second.		
Coffin ave.,			Acushnet riv.,	Purchase.
Coggeshall,			" "	Acushnet ave.
			Purchase,	Reynolds.
Collet,	Belleville ave.,	Acushnet ave.		
Collins,			Cottage,	Cedar.
Columbia ave.,	E. French ave.,	Ruth ave.		
Columbia,			Clay,	Allen.
Cottage,	Dartmouth,	Allen,	Robeson,	Durfee.
	Bedford,	Grove,	Willis,	Parker.
	Arnold,	Union.		
	Morgan,	Elm.		
	Elm,	Willis.		
	Parker,	Robeson.		
Cotter,			Cedar Grove,	Coggeshall.
County,	Cove road,	Cove,	Linden,	Purchase.
	Division,	Independent.		
	Rivet,	Thompson.		
	Allen,	Bedford.		
	Kempton,	Mill.		
	Hillman,	Willis.		
Court,	Cedar,	Ash.		
	Park,	Chepatchet.		
Cove road,	County,	Orchard,	W. Fr. ave.,	County.
Cove,	E. French ave.,	W. Fr'nch ave.,	"	"
Crapo,			Cove road,	Washington.
David,	M. Point road,	" "		
Davis,			Acushnet riv.,	Church.
Deane,			" "	Purchase.
Delano,			County,	Front.
Devoll,	Allen,	Grape.		
Division,			Water,	Crapo.
Durfee,	Ashland,	Rockdale ave.		
Dartmouth,	Town line,	Spooner.		
	Fair,	Grinnell.		
Dover,	Second,	Acushnet ave.		
Dudley,	Mid. Pt. road,	W. Fr'nch ave.		
Dunbar,	Bolton road,	Dartmouth.		
Duncan,	Belleville ave.,	Kearsarge.		
Elm,	Emerson,	Chancery,	{ Chancery,	Liberty. }
E. French ave.,	Ruth ave.,	Cove.	{ Florence,	Reed. }
Emerson,	Court,	Kempton,	Arnold,	Union.
Fair,	County,	Crapo,	Crapo,	Sears.
	Sears,	Dartmouth.		

LIST OF STREET GRADES.

On	Proposed Grade.		Established Grade.	
Name of St.	From St.	To St.	From St.	To St.
Field,			Stowell,	Allen.
Fifth,	Grinnell,	Bedford.		
	Russell,	Madison.		
	Spring,	Union.		
First,	Cove,	South.		
	Grinnell,	Howland.		
	Union,	School.		
Florence,			Kempton,	Hillman.
Foster,	Middle,	Kempton.		
	Hillman,	Maxfield.		
Fourth,	Rockland,	Bedford,	Rivet,	Rockland.
	Russell,	Madison.		
Front,	Delano,	Blackmer,	Blackmer,	Rivet.
	South,	Howland,	Potomska,	South.
	Logan,	Davis,	Howland,	Grinnell.
			Wamsutta,	Logan.
Fruit,			Juniper,	Dartmouth.
Gifford,			Acushnet riv.,	Water.
Grand,			Rockdale ave.,	Shawmut ave.
Granfield,	Coggeshall,	Beetle.		
Grape,			Oak,	Rockdale ave.
Griffin,	Front,	Water.		
Grinnell,	Crapo,	Bonney,	Acushnet riv.,	Front.
	Dartmouth,	Cottage.		
Grove,	Cottage,	Ash.		
George,	M. Pt. road,	W. Fr'nch ave.		
Hall,			Rivet,	Rockland.
Harbor,			M. Point road,	Social.
Harmony,			Cove,	Gifford.
Thompson,			Bonney,	Dartmouth.
Harrison ave.,	Ruth ave.,	Cove.		
Harrison,			Oak,	Hickory.
Hawthorn,	Cottage,	Ash,	Ash,	Town line.
Hazzard,	Purchase,	Ashland.		
Hemlock,		Fruit,	Thompson,	Rockland.
Hickory,	Dartmouth,	Clay.		
Hicks,			Acushnet ave.,	Front.
High,	Pleasant,	Foster.		
Highland,			Durfee,	Mt. Vernon.
Hillman,	County,	Summer,	Newton,	Rockdale ave.
	Cedar,	Hunter.		
Holly,	Belleville ave.,	Bowditch,	Bowditch,	Brook.
Howard ave.,			Acushnet riv.,	Acushnet ave.
Howard,	Coggeshall,	Beetle,	Cedar Grove,	Coggeshall.
Howland,	Prospect,	Water,		
Hunter,			Kempton,	Maxfield.
Hyacinthe,	Rivet,	Thompson,		
Independent,			County,	Crapo.
James,			Arnold,	Court.
Jenney,			Court,	Kempton.

LIST OF STREET GRADES.

On	Proposed Grade.		Established Grade.	
Name of St.	From St.	To St.	From St.	To St.
Joseph,	Chancery,	Shawmut ave.,		
Jouvette,			Crapo,	County.
Juniper,			Larch,	Fruit.
Katharine,			Crapo,	County.
King's H'way,			Mt. Pleasant,	Acushnet Sta'n.
Kilburn,	Acushnet riv.,	Front.		
Kearsarge,	Hadley,	Perry.		
Kempton,	Pleasant,	Foster.		
	Cottage,	Cedar.		
	Ash,	Emerson.		
	Rockdale ave.,	Dartmouth line.		
Kenyon,	Belleville ave.,	Front.		
Larch,	Bolton road,	Dartmouth,	Dartmouth,	Juniper.
Liberty,			Court,	Kempton.
Linden,	Pleasant,	State.		
Lindsey,	Court,	Kempton.		
Locust,	County,	Shawmut ave.,	Cedar,	Shawmut ave.
Logan,	Front,	Purchase.		
Lombard,	Rockland,	south.		
Madison,	Fourth,	Fifth,	Acushnet ave.,	Fourth.
	County,	Orchard.		
Maitland,			Cedar,	Shawmut ave.
Maple,			Ash,	Tremont.
Margin,			Cove road,	Cove.
Marvin,	Acushnet ave.,	Howard.		
Market,			Pleasant,	Sixth.
Maxfield,	Walton,	Thomas.		
	Chestnut,	Cottage.		
	Ash,	Rockdale ave.		
Merrimac,	Acushnet river,	Acushnet ave.		
McGurk,	Cove,	Mid. Pt. Road.		
Mid. Pt. road,	W. French ave.,	Butler.		
Middle.	Emerson,	Chancery.		
	Florence,	Rounds.		
Mill road,	Union,	Acushnet ave.		
Mill r'd, No. 3,	Orchard,	Bolton road.	Ash,	Cedar.
Mill,			Park,	Newton.
Morton Court,	Cove,	north.	Florence,	Rockdale ave.
Mitchell,			Coggeshall,	Sawyer.
Mosher,	County,	Crapo,		
	Peckham,	Coggeshall.		
Mt. Pleasant,	Pasel's W. line,	Tarkiln H. r'd,	Coggeshall,	Pasel's N. line.
Myrtle,	Linden,	Coggeshall.		
Mulberry,	Larch,	Rivet.		
Nash road,	Church,	Mt. Pleasant,	Acushnet ave.,	Church.
Nelson,			County,	Crapo.
Newton,	Court,	Elm,	Elm,	Hillman.
North,			Ash,	Rockdale ave.
Nye,			Belleville ave.,	Acushnet ave.
Oak,	Dartmouth,	Grape,	Grape,	Allen.

LIST OF STREET GRADES.

On	Proposed Grade.		Established Grade.	
Name of St.	From St.	To St.	From St.	To St.
Orchard,	Fair,	Washington,	Cove road,	Rivet.
	Grinnell,	Dartmouth.		
Ocean,	Maple,	Arnold.		
Page,	Grape,	Hawthorn,	Allen,	Grape.
Palmer,			Union,	Kempton.
Park,	Arnold,	Parker.		
Parker,	Chestnut,	Spruce.		
	Cedar,	Cemetery.		
Peckham,			County,	Mt. Pleasant.
Penniman,	Purchase,	County.		
Perry,	Acushnet ave.,	Belleville ave.		
Phillip's ave.,	Acushnet river,	Riverside ave.		
Pleasant,	High,	Kempton,	Union,	William.
	Mill,	Maxfield.		
	Austin,	Weld.		
			Linden,	Weld.
Pope,	County,	Cottage.		
Potomska,			Prospect,	Fourth.
Prospect,	Potomska,	Howland.		
Purchase.				
Reed,			Kempton,	Court.
Reynolds,			Linden,	Clark.
Richmond,			Parker,	Maitland.
River road,			612 feet S. of Howard ave.,	Main.
Riverside ave.,	Coffin ave.,	Philip's ave.		
Rivet,	Water,	County,	Front,	Water.
			County,	Dartmouth.
Ricketson's C't,	Sixth,	W., 315.75 ft.		
Robeson,	Ashland,	Shawmut ave.		
Rockdale ave.,	Kempton,	Maxfield,	Dartmouth,	Kempton.
Rockland,	Prospect,	County,	County,	Dartmouth.
Rotch ave.,			Hawthorn,	Court
Rounds,	Court,	Elm,	Elm,	Kempton.
Rural,	Grape,	Allen.		
Ruth ave.,	E. French ave.,	Viall.		
Salisbury,			Ruth ave.,	Cove.
Sawyer,			Acushnet riv.,	County.
Scott.			County,	Crapo.
Sears,	Fair,	Washington.		
Second,	Cove,	Coffin,	Blackmer,	Division.
	William,	Elm,	Howland,	Grinnell.
Shawmut ave.,	Sycamore,	Hathaway r'd.		
Sherman,	County,	Bonney.		
Shore,			Grit,	Cove road.
Short,	Grape,	Allen.		
Sisson,	Arnold,	Court,	Court,	Union.
Sixth,	Spring,	Union.		
	William,	Elm.		
Small,	Grape,	Allen.		

LIST OF STREET GRADES.

On	Proposed Grade.		Established Grade.	
Name of St.	From St.	To St.	From St.	To St.
Smith,			Walden,	County.
Social,			McGurk,	W. French ave.
South,	Second,	Acushnet ave.,	Prospect,	Acushnet river.
Spooner,			Lombard,	Dartmouth.
Spring,			Water,	Second.
Spruce,			Parker,	Locust.
Stapleton,			Cove road,	Cove.
State.				
Stone.	Summer, Sycamore, Hillman,	Parker, Maxfield,	Grape,	Allen.
Swift,	Bolton road,	Dartmouth.		
Sycamore,			Cedar,	Park.
Sears' Court,	Purchase,	Pleasant.		
St. first south of Dunbar,	Bolton road,	Dartmouth.		
St. second S. of Dunbar,	" "	"		
Second,			Blackmer,	Division.
Second,			Division,	Cove.
South,			Prospect,	Acushnet river.
Tarkiln H. r'd,	Acushnet ave.,	Mt. Pleasant.		
Thomas,	Sycamore,	north.		
Thompson,			Fourth,	Dartmouth.
			"	County.
Tallman,	Belleville Ave.,	Bowditch.		
Topham,			Highland,	Shawmut ave.
Tremont,	Hawthorn,	Court.		
Trinity,	Cedar,	Shawmut ave.		
Union,	Acushnet ave.,	Seventh.		
			Ash,	Old Town line.
Valentine,	M. Point road,	W. Fr. ave.		
Vincint,			Howard ave.,	south.
Walden,	Maxfield,	Smith.		
Wamsutta,	Front,	Acushnet ave.		
Ward,			Hickory,	Bedford.
Warren,	M. Point road,	W. Fr. ave.		
Walden,			Sycamore,	Smith.
Weld,			County,	Mt. Pleasant.
Water,	Delano,	Rivet.		
Warwick,			Thompson,	Rockland.
Washburn,	Acushnet ave.,	Belleville ave.		
Washington,	Crapo,	Bonney,	Fourth,	County.
	Bonney,	Orchard.		
	Sears,	Dartmouth.		
Weaver,			Dartmouth,	Field.
Welcome,			W. Fr. ave.,	east.
Weld,	Purchase,	County,	County,	Mt. Pleasant.
W. Fr'nch ave.,	M. Point road,	Cove.		
Willis,	County,	Summer.		
	Chestnut,	Cedar.		

LIST OF STREET GRADES.

On	Proposed Grade.		Established Grade.	
Name of St.	From St.	To St.	From St.	To St.
Winsor,			County,	Crapo.
William,	Second,	Acushnet ave.		
	Purchase,	Sixth.		
Willard,	M. Point road,	W. Fr. ave.		
Willow,			Cottage,	Shawmut ave.
Wilson,	Austin,	Durfee.		
Woodland,	M. Point road,	W. Fr. ave.		
Pearl,			92.03 ft. E. of Acushnet av.,	O. C. R. R. depot.
Viall,	Ruth ave.,	Cove.		
Front,			Washburn,	Coffin ave.
Hathaway r'd,	Mt. Pleasant,	Shawmut ave.		
Pope,			Chestnut,	County.
Rockland,			Prospect,	Acushnet riv.

Report on Grade Crossings,

BY

JOHN D. FOUQUET, Civil Engineer.

To the members of the City Council of the City of New Bedford having in hand the consideration of the elimination of all grade crossings of the Old Colony Railroad within the limits of said city, the following report is most respectfully submitted.

I have been called upon to make a careful examination of the situation and prepare plans and estimates for the various methods of accomplishing a rather difficult problem, owing to the roads terminating at tide water instead of passing through the city, and where there is no possibility of making a new location without severing the present connection between railroad and tide water navigation.

To take extreme measures would, it strikes me, be suicidal to the best interests of your city, whose prosperity depends largely upon the railroad and its connection with tide water to enable its manufactories to obtain fuel and supplies, and transport its manufactured products to distant markets; therefore, I have endeavored to take an impartial view of the present situation, and am prepared to give you the result of my examination, with careful preliminary estimates of the various schemes which seem to me practical.

SCHEME 1.

Scheme 1 consists in elevating all tracks, including Fall River Branch, from a point north of Nash road to a point south of Wamsutta street, leaving the present track to passenger station and along water front to Reading coal docks undisturbed. The number of grade crossings to docks can be reduced by extending a road from dock to dock on east side of the railroad company's right of way. As an addition to this scheme, I have prepared estimates for elevating all tracks south from Wamsutta street to Bridge street and coming to grade as soon as practicable after passing over Bridge street, using an iron structure to the south end of passenger station grounds and a timber structure beyond. I also have considered and estimated for continuing the elevated timber structure from Bridge street to the end of the present tracks on Reading coal docks.

SCHEME 2.

Scheme 2 only differs from Scheme 1 in that all tracks north of Purchase street are carried on earth embankments without retaining walls.

SCHEME 3.

Scheme 3 consists in providing overhead crossings, beginning at Nash road and ending with Wamsutta street and Acushnet avenue, which are so closely connected in the matter of crossings that they might be considered as one and the same.

Another scheme, that of depressing the tracks, might be suggested; but the connection with the Fall River Branch, which at present approaches the main line with a very steep grade, and also the serious interference with the city's drainage system, and many other difficulties, render such a scheme unworthy of consideration.

It must be borne in mind that either of the first two schemes mentioned are going to seriously affect both the city and the railroad company; the city, by the obstruction of crossings during the process of construction, and damage to property along the line of the railroad by the erection of high retaining walls, shutting off light and a free circulation of air in the more thickly populated districts; the railroad, by causing an increase in cost of transportation and the handling of all merchandise arriving at or leaving the city. There are at present several points at which cars can be loaded and unloaded adjacent to parallel streets. With an elevation of tracks, the facilities would be very much contracted and the time required for receiving and delivering of freight would be greatly extended. These are points worthy of consideration, as anything which tends to hinder the facility of transportation also hinders the rapid growth and prosperity of the city and gives an undue advantage to rival interests.

In the desire to eliminate all grade crossings, especially those along the water front, would it not be unwise to force an elevation of tracks upon the docks which could not be otherwise reached except by an elevated system? For the sake of argument, let us anticipate the result. Take, for example, the Old Colony docks. In order to elevate the tracks on this dock and the shed which covers it, an expenditure of something like $59,000 will be required, and when this is accomplished the cost of handling both freight and passengers will be so greatly increased as to cause the interested corporations to abandon their present arrangements and locate at a more favorable point.

Again, to force the raising of tracks on Reading docks would involve an expenditure of nearly $211,000, and, when done in the cheapest manner possible, would seriously affect the price of handling coal; so much so, in fact, that I am of the opinion the Reading company would find it greatly to their

interests to transfer their plant from your city to some more favorable point.

I am of the opinion that it would not be for the best interest of the city to elevate the tracks south of Wamsutta street, and would reduce the number of grade crossings by the method before mentioned, and require such crossings to be guarded by automatic gates.

The present passenger station and grounds are very pleasing features, and the station itself, "Richardsonesque" in style of architecture, with its commodious appointments and shelter canopies so extended as to afford protection to a long train load of passengers arriving and departing, is a structure of which any city might be proud.

To elevate the tracks at passenger station would necessitate long flights of stairs and elevators to raise and lower baggage to or from the street level, and the tracks would have to be planked or otherwise floored for full width of elevated structure, and for a length of several hundred feet shelter canopies would also be required, with additional waiting rooms at track level. Bridges would also be required to avoid crossing tracks.

From my investigation I cannot see any great advantage to be gained by the elevating of the tracks at passenger station, when the element of danger to life and limb is now at the minimum, and the stilting of the tracks and the necessary accompaniments would not enhance the beauty of the surroundings.

It has been stated to me that unless the tracks are raised along the water front, the approach to the new bridge will have to be raised at an additional expense of about $144,000. Now let us see what it costs to avoid this expenditure, by keeping the elevated system from Wamsutta street to grade beyond Bridge street. By referring to tabulated statement, it is found that, in order to avoid this additional cost of bridge

crossing, an expenditure of $368,000, in round numbers, would be required.

Again, if I may be allowed to suggest it, what is to prevent the Old Colony Railroad Company from securing all of the dock property not now owned by them, to which access can only be obtained by crossing tracks at grades, and thus preventing the enforcement of the law in regard to grade crossings? It certainly would cost them far less than to elevate the tracks, in the end.

Accompanying this is a tabulated statement in detail of each scheme, but, in order to make it more comprehensive, I give as follows: The entire cost of Scheme 1, from north of Nash road to south of Wamsutta street, including the bridges, $773,491.55; thence by wood and iron elevated structures to south of Bridge street, $368,082.05; making the entire cost of this scheme $1,141,573.60.

The entire cost of Scheme 2, from north of Nash road to south of Wamsutta street, $651,433.72; thence by wood and iron structures to south of Bridge street, $368,082.05; making a total of $1,019,515.77, a difference of $122,057.83.

The entire cost of Scheme 3, which embraces the following overhead crossings, viz., Nash road, Purchase, Sawyer, Clark, Weld, Wamsutta, Wall, Acushnet avenue, and Bridge street, at the estimate given to the county commissioners by Mr. Shaw, is $610,751.06.

To which should be added the cost of damage to adjoining properties, which, under the circumstances, I do not feel competent to estimate, owing to a lack of knowledge of the valuation of real estate in your city.

Omitting the question of land damage, we have a difference in cost of $408,764.71 in favor of Scheme 3.

By omitting Wall street, a still greater reduction might be accomplished.

At my first interview I was asked if overhead crossings of streets would not greatly disfigure the streets, and I replied

that it would; and, although my opinion is now the same, still the amount of disfigurement would somewhat depend upon the character of the work. My estimates are all based upon second class ashler (broken range) work. One might say that a huge mass of continuous masonry raised 15 feet above grade crossings, dividing the city in two parts, was also a disfigurement greater by far than an overhead crossing at long intervals. The approaches to overhead bridges are graded to five feet to 100 feet.

In closing my report, I wish to acknowledge my appreciation of the courtesy received at the hands of the members of the City Council, and also tender my sincere thanks for the valuable assistance rendered me by the City Engineer in furnishing such data as was necessary to a clear understanding of the situation and the making of both estimates and reports.

Very respectfully yours,

JOHN D. FOUQUET,
Civil Engineer.

SCHEME NO. 1.

This scheme starts with retaining walls from point of beginning to south of Wall street, where it comes to grade.

STARTING 1,460 FEET NORTH OF NASH ROAD.

Excavation,	$317.32	
Fill,	4,694.25	
Foundations,	3,966.50	
Walls,	28,652.75	$37,630.82

NASH ROAD TO PURCHASE STREET.

Excavation,	$1,839.60	
Fill,	14,265.00	
Foundations,	23,001.55	
Walls,	83,164.13	122,270.28

FALL RIVER BRANCH TO PURCHASE STREET.

Excavation,	$4,077.32	
Fill,	4,056.50	
Foundation,	966.50	
Wall,	5,547.50	10,647.82

PURCHASE STREET TO SAWYER STREET.

Four tracks.

Excavation,	$1,154.77	
Fill,	15,818.21	
Foundation,	14,434.70	
Wall,	47,529.09	78,936.77

SAWYER STREET 455 FEET NORTH OF WELD STREET.

Excavation,	$1,418.77	
Fill,	19,881.30	
Foundation,	17,734.60	
Wall,	58,279.83	97,314.83

455 FEET NORTH OF WELD STREET TO WELD STREET.

Excavation,	$542.12.	
Fill,	1,272.65	
Foundation,	6,777.50	
Wall,	22,145.90	30,738.17

WELD STREET TO LOGAN STREET.

Excavation,	$252.96	
Fill,	2,487.05	
Foundation,	3,162.00	
Wall,	10,534.72	$16,436.73

LOGAN STREET TO WAMSUTTA STREET.

Includes new round house and fill, with new turn-table pit.

Excavation,	$1,125.71	
Fill,	49,830.00	
Foundation,	14,071.40	
Wall,	46,295.20	
Round house,	20,800.00	
Turn-table pit,	1,500.00	133,622.31

Alternate A.

LOGAN STREET TO WAMSUTTA STREET.

Excludes round house, fill, and continues retaining wall parallel with track.

Excavation,	$1,011.92
Fill,	21,620.05
Foundation,	12,649.10
Wall,	41,927.60
	$77,208.67

WAMSUTTA STREET TO LINE OF WALL STREET.

Coming to grade with freight tracks,

Excavation,	$346.78	
Fill,	6,901.50	
Foundation,	4,334.75	
Wall,	10,169.67	21,752.70

FROM WAMSUTTA STREET 1,600 FEET TO GRADE.

Passenger tracks.

Excavation,	$970.50	
Fill,	9,800.00	
Foundation,	12,121.15	
Wall,	31,649.80	54,541.45

BRIDGES.

Nash road, 60 feet span,	$7,200 00	
Purchase street, 60 feet span,	7,200.00	
Sawyer street, 60 feet span,	7,200.00	
Weld street, 60 feet span,	7,200.00	
Logan street, 60 feet span,	7,200.00	
Wamsutta street, 140 feet span,	16,800.00	
Acushnet avenue, 140 feet span,	16,800.00	$69,600.00
Total,		$673,491.55
Add false work and temporary expedients,		100,000.00
Total,		$773,491.55
Total, by alternate A,		$695,325.31

SCHEME NO. 2.

Earth fill 1,460 feet north of Nash road to Purchase street, including 1,050 feet of Fall River branch.

1,460 FEET NORTH OF NASH ROAD TO SAME.

Embankment,	$9,226.50	
Abutment,	1,293.60	
Bridge,	7,200.00	$17,720.10

NASH ROAD TO PURCHASE STREET.

Embankment,	$28,077.29	
Abutments,	2,587.20	
Bridge,	7,200.00	37,864.49

FALL RIVER BRANCH.

Embankment,	7,306.50

BALANCE OF ELEVATION SAME AS PER SCHEME NO. 1.

Purchase street to Sawyer,	$78,936.77	
Sawyer to Weld,	128,052.67	
Weld to Logan,	16,436.73	
Logan to Wamsutta,	133,622.31	
Wamsutta to Wall,	21,752.70	
Wamsutta to grade on passenger tracks,	54,541.45	
Bridges from and including Sawyer street.	55,200.00	488,542.63
		$551,433.72
Add false work, etc.,		100,000.00
Total,		$651,433.72

RECAPITULATION, TO WAMSUTTA STREET INCLUSIVE.

Scheme No. 1.	Retaining walls and embankment,	$773,491.55
Scheme No. 2.	Earth embankment to Purchase street,	651,433.72
	Difference,	$122,057.83

Iron structure from south side Wamsutta street to Willis street, south side depot grounds.

Abutment south side Wamsutta street,	$2,160.00	
Iron structure platforms and elevators to Willis street, south side of depot grounds,	319,631 50	$321,791.50

SIDING TO WAMSUTTA MILLS.

Wood trestle 400 feet,	$4,322.00

WILLIS STREET TO MAXFIELD STREET.

Wood trestle, four tracks,	39,940.00

MAXFIELD STREET TO HILLMAN STREET.

Wood trestle,	6,600.00

GARFIELD & PROCTOR DOCK.

Wood trestle,	12,500.00

HILLMAN STREET TO BRIDGE.

Wood trestle,	23,040.00

BRIDGE TO UNION STREET AT GRADE, 1,110 FEET.

Wood trestle,	14,430.00	100,832.00
		$422,623.50
Less coming to grade south of Wamsutta street, Scheme No. 2,		54,541.45
Total cost of elevating tracks from Wamsutta street to Bridge street, coming to grade at Union street,		$368,082.05

Scheme No. 1,	$773,491.55	
Plus iron and trestle,	368,082.05	
Total, including temporary trestle,		$1,141,573.60
Scheme No. 2,	$651,433.72	
Plus iron and trestle,	368,082.05	
Total, including temporary trestle,		$1,019,515.77

Elevating tracks from Bridge street to end of Reading dock.

BRIDGE STREET TO UNION STREET.

Wood trestle,	$20,535.00	

UNION STREET TO SCHOOL STREET.

Wood trestle,	27,569.20	

OLD COLONY FREIGHT DOCKS.

Elevating track and shed,	59,080.00	

SCHOOL STREET ON SOUTH FRONT STREET.

Wood trestle,	4,044.30	

READING DOCKS.

Tracks, bins, etc,	99,664.80	$210,893.30
From 1,460 feet beyond Nash road to Bridge street,	$1,127,143.60	
Plus Bridge street to end of Reading dock,	210,893.30	
Scheme No. 1,		$1,338,036.90
From same point of beginning by Scheme No. 2,	$1,005,085.77	
Plus from Bridge street to end of Reading dock,	210,893.30	
Scheme No. 2,		1,215,979.07
Difference between No. 1 and No. 2,		$122,058.73

SCHEME NO. 3.

Elevating streets over railroad.

NASH ROAD.

Excavation,	$503.04	
Fill,	3,730.50	
Foundation,	6,288.00	
Retaining wall,	23,814.00	
Parapet wall,	4,375.00	
Bridge, 70 feet span,	8,400.00	$47,110.54

PURCHASE STREET.

Excavation,	$724.24	
Fill,	5,664.00	
Foundation,	9,053.00	
Retaining wall,	34,669.60	
Parapet wall,	6,174.00	
Bridge, 70 feet span,	8,400.00	64,684.84

SAWYER STREET.

Excavation,	$475.24	
Fill,	3,995.50	
Foundation,	5,940.50	
Retaining wall,	22,796.20	
Parapet wall,	6,440.00	
Bridge, 40 feet wide,	4,800.00	44,447.44

CLARK STREET.

This is an alternate with Weld street.

Excavation,	$479.04	
Fill,	4,505.60	
Foundation,	5,988.00	
Retaining wall,	23,234.40	
Parapet wall,	4,165.00	
Bridge, 147 feet span,	17,640.00	
Arch,	1,625.68	57,637.72

BRIDGE STREET.

Approximate figures as per report of Mr. Shaw to county commissioners,	144,000.00

WELD STREET.

Excavation,	$563.10	
Fill,	3,907.53	
Foundation,	6,089.80	
Retaining wall,	16,992.38	
Parapet wall,	4,676.00	
Bridge, 40 feet span,	4,800.00	
Bridge, 35 feet span,	4,200.00	
Bridge, 50 feet span,	6,000.00	$47,228.81

WAMSUTTA STREET.

Excavation,	$628.88	
Fill,	3,598.65	
Foundation,	7,485.00	
Retaining wall,	24,965.50	
Parapet wall,	4,970.00	
Bridge, 200 feet span,	24,000.00	65,648.03

ACUSHNET AVENUE.

Excavation,	$1,226.80	
Fill,	6,718.00	
Foundation,	15,335.00	
Retaining wall,	49,063.00	
Parapet wall,	7,770.00	
Bridge, 4,050 feet at $3.50,	14,175.00	94,287.80

WALL STREET OVER PASSENGER TRACKS.

Excavation,	$223.68	
Fill,	3,963.00	
Foundation,	6,039.00	
Retaining wall,	22,565.20	
Parapet wall,	4,515.00	
Bridge,	8,400.00	45,705.88
		$610,751.06

JOHN D. FOUQUET.

In Board of Aldermen,
February 21, 1894.

Received, ordered printed in the City Documents, and sent down for concurrence.

D. B. LEONARD,
City Clerk.

In Common Council,
2 mo., 21, 1894.

Concurred.

WILLIAM A. MACKIE,
Clerk.

1894—City Document No. 12.

City of New Bedford.

FIRST ANNUAL REPORT

OF THE

INSPECTOR OF BUILDINGS

TO THE

CITY COUNCIL,

FOR THE YEAR

1893.

NEW BEDFORD:
Evening Journal Company, Printers to the City.
1894.

REPORT.

OFFICE OF INSPECTOR OF BUILDINGS,
NEW BEDFORD, MASS., Jan. 31, 1894.

To His Honor the Mayor, and City Council of the City of New Bedford.

GENTLEMEN:— I was appointed Inspector of Buildings on the 10th of August, 1893, and entered on my duties as such immediately.

On the 14th of September, 1893, an ordinance was passed, relative to the erection of buildings and defining the duties of the Inspector of Buildings.

I have the honor to report that there have been 104 permits issued from this office during the four and one-half months ending December 31, 1893, for building, alterations and repairs, at an estimated cost of $193,215.00. Seven examinations have been made, in cases of dangerous constructions, violating of the building ordinances, etc., and seventy-eight visits have been made to buildings in course of erection or repair.

I am pleased to note that builders and owners have promptly secured permits, and that a general compliance with the building ordinances of the city has been manifested.

From the best data obtainable I find that there have been erected in the city, during the year 1893, some 340 buildings of all classes, at an estimated cost of $1,800,000, divided generally as follows:

Dwellings, singly and in blocks,	$490,000
Stores and dwellings combined,	80,000
Churches, chapels and charitable institutions,	65,000
Public buildings (school and engine houses),	70,000
Business buildings (stores, offices, etc.),	430,000
Buildings for manufacturing purposes,	650,000
Miscellaneous structures (stables, sheds, etc.),	15,000
	$1,800,000

It has been made the duty of the Inspector of Buildings to take full charge of the construction of all buildings being erected by the city.

In this connection I have to report that the work on the new school house, corner of Fourth and Madison streets, and on the addition to the Acushnet avenue school house, and on the new fire engine house, corner of Acushnet avenue and Davis street, is progressing as fast as the weather will permit, and as fast as is consistent with good construction.

I wish to call attention to the propriety of extending, by ordinance, the limits of the second fire district, so as to include the entire city, and to require all persons about to build to obtain a building permit. Much building is being done outside of the second fire district, of which it is difficult to keep a record. Also to require all such persons to obtain the street grade and line before proceeding to build.

Certain building regulations have been submitted for consideration; these are intended to supplement existing ordinances, and to conform more to the practice of other cities of our size, where building inspection has been practiced for some years with excellent results.

Due regard for safe construction, protection against fire, and to avoid danger to the public health, impels me to ask for this subject your serious consideration.

Respectfully submitted,

EDMUND O'KEEFE,
Inspector of Buildings.

In Board of Aldermen,
May 24, 1894.

Received, ordered printed in the City Documents, and sent down for concurrence.

D. B. LEONARD.
City Clerk.

In Common Council,
May 31, 1894.

Concurred.

WILLIAM A. MACKIE,
Clerk.

1893—CITY DOCUMENT NO. 13.

REPORT

OF THE

BOARD

OF

OVERSEERS OF THE POOR

OF THE

CITY OF NEW BEDFORD,

FOR THE YEAR 1893.

NEW BEDFORD:
EVENING JOURNAL COMPANY, PRINTERS TO THE CITY.
1894.

MEMBERS OF THE BOARD.

ORRICK SMALLEY,
THOMAS H. KNOWLES,
JAMES E. STANTON.

OFFICERS OF THE BOARD.

ORRICK SMALLEY,
Chairman and Secretary.

ELLA F. BUCKLYN,
Clerk to the Secretary.

WILLIAM G. POTTER,
Physician to the Board.

ALBERT A. CHACE,
Superintendent of Almshouse.

MRS. ALBERT A. CHACE,
Matron of Almshouse.

REV. EDWARD WILLIAMS,
Chaplain of Almshouse.

STEPHEN P. COFFIN,
Superintendent of Wood and Coal Yard.

REPORT.

To his Honor the Mayor and the City Council of the City of New Bedford, Mass.:

GENTLEMEN,—The Board of Overseers of the Poor respectfully present the report of their doings for the year 1893.

This year was noted for the increased demand made upon it, on account of the exceedingly cold weather during the months of January, February, March and April. And again when the mills shut down in October, November, and the winter, the increased demand was more than at any time during the service of the present Board. With the increased population, and the general hard times, the expenses of this department have, as a matter of course, been larger than in the year previous.

The Board has endeavored to be as judicious in their distributions as possible, and satisfy the demand made upon it. To attend to this with the help provided (namely, secretary and clerk) has required constant care and labor. November 22 additional aid (namely, visiting clerk) was provided, enabling the Board to attend more closely to the various calls made upon the department.

The bills of credit received have come in exceedingly well, and have enabled us to meet the expenses within the appropriation asked for at the beginning of the year.

The year of 1893 was a year of vicissitudes in this department, in as much as the finance committee changed the

mode of keeping the account of moneys expended to include incidentals rather than itemizing; and also transferring all credits to the unappropriated account rather than to the department.

The tables appended and statistical accounts are a part of this report, which we desire you to peruse, as it will give you a more detailed account of the receipts and expenditures.

The Almshouse is in a very satisfactory condition. The resignation of Mr. P. S. Macy and wife, who have acted as superintendent and matron for the past fourteen years, took effect October 1. The Board deemed it advisable to appoint Mr. A. A. Chace and wife to fill the vacancies, he having been an employe at the Almshouse for the past twenty-six or seven years. The management of the Almshouse so far has proved that the Board made no mistake in appointing Mr. Chace.

In conclusion, we take pleasure in reporting faithful services on the part of our employes, and we desire to express our thanks for kindnesses received from his Honor the Mayor, the Board of Aldermen, and Common Council.

Respectfully submitted,

ORRICK SMALLEY,
THOMAS H. KNOWLES,
JAMES E. STANTON,

Overseers of the Poor of New Bedford.

FINANCIAL STATEMENT.

Dr.

To amount of annual appropriation,		$27,225.00
" special "		5,811.56
" transfer,		60.67
Received from State, for support of paupers,		2,680.08
" cities and towns, for support of paupers,		2,773.20
For board of soldiers,		440.33
For board of lunatics,		979.62
Miscellaneous,		17.00
City Almshouse Credits:		
Amount from fire department,	$649.65	
Police department,	105.85	
Sale of produce,	624.87	
Board of paupers,	431.83	
Board of soldiers,	269.72	2,081.92
Total,		$42,069.38

Cr.

By amounts expended, as per monthly audits, as follows:

Months.	Outside Relief.	Lunatic Hospitals and Feeble Minded.	Cities and Towns.	Alms-house.	Totals.
January,	$2,307.44	$1,849.98	$472.54	$925.73	$5,555.69
February,	1,949.68	133.23	15.50	831.98	2,930.39
March,	1,815.48			890.17	2,705.65
April,	1,528.52	1,887.79	50.00	841.07	4,307.38
May,	1,412.35	73.11	63.00	775.55	2,324.01
June,	1,290.01		48.00	1,001.71	2,339.72
July,	1,223.71	2,259.00	81.17	1,012.76	4,576.64
August,	2,039.57		23.64	811.42	2,874.63
September,	2,001.65		36.00	1,339.03	3,376.68
October,	1,628.77	1,925.67		941.00	4,495.44
November,	1,442.44	188.97	34.65	918.89	2,584.95
December,	2,291.64		98.00	1,608.56	3,998.20
Totals,	$20,931.26	$8,317.75	$922.50	$11,897.87	$42,069.38

EXPENDITURE IN DETAIL FOR OUTSIDE RELIEF IN 1893.

Months.	Groceries.	Lunatic Hospitals.	Cities and Towns.	Cash Orders.	Salaries and Travel.	Physician and Medicine.	Burials.	Boots and Clothing.	Transportation.	Horse hire.	Office Expense.	Board Outside.	Wood and Coal Yard.	Stationery.	Totals.
January,	$1,096.50	$1,849.98	$472.54	$125.15	$154.66	$135.00	$81.50	$15.50	$67.50	$5.25	$.70		$625.68		$4,629.96
February,	994.75	133.23	15.50	100.00	162.49	135.00	76.00	2.50	2.35		1.35	$23.57	450.42	$1.25	2,098.41
March,	732.25			117.50	162.49	139.48	25.00		3.35	11.75	59.27	2.85	560.94	.60	1,815.48
April,	768.25	1,887.79	50.00	105.00	262.49	135.00	5.00	4.75	32.10		2.15		164.93	48.85	3,466.31
May,	627.85	73.11	63.00	151.50	163.83	135.00	162.00	8.25		9.25	4.35		150.32		1,548.46
June,	674.50		48.00	119.50	162.49	135.00	8.00		55.00	16.25	13.50	52.07	43.50	10.20	1,338.01
July,	557.50	2,259.00	81.17	132.95	162.49	135.00	88.00	2.00	77.20	6.25	7.45	2.50	48.75	3.62	3,563.88
August,	568.25		23.64	118.50	262.49	135.00	145.00		1.45	4.50	4.80	.75	798.83		2,063.21
September,	900.70		36.00	115.00	162.49	135.00	138.00	5.00	33.98	16.75	52.00	31.45	393.33	17.95	2,037.65
October,	924.50	1,925.67		146.00	162.49	135.00	74.00	10.50	34.95	11.25	10.69	22.14	86.00	11.25	3,554.44
November,	765.75	188.97	34.65	146.75	177.44	135.00	26.00	5.00	49.00	30.25	4.45		102.80		1,666.06
December,	819.32		98.00	106.00	320.90	135.00	160.00	6.50	2.65	2.75	43.83	64.30	630.39		2,389.64
Totals,	$9,440.12	$8,317.75	$922.50	$1,483.85	$2,316.75	$1,624.48	$988.50	$60.00	$359.53	$114.25	$204.54	$199.63	$4055.89	$93.72	$30,171.51

DETAILED EXPENDITURE AT THE ALMSHOUSE, 1893.

Months.	Flour and Grain.	Dry Goods and Clothing.	Beef, Fish, etc.	Groceries.	Shoes, Hats and Leather.	Furniture and Crockery.	Hardware.	Fuel.	Repairs on Premises.	Carriages, Repairs, and Blacksmithing.	Superintendent, Labor and Nursing.	Medicines.	Oils, Paints, etc.	Dressing.	Miscellaneous.	Totals.
January,	$80.10	$19.21	$61.07	$214.88	$40.55	$22.25	$21.75	$54.79	$47.53	$22.17	$341.43					$925.73
February,	79.65	27.95	69.08	155.21	10.50	1.85	2.35	152.51	6.88	1.94	319.31	$4.00			$.75 Stationery.	831.98
March,	84.95	66.95	74.92	130.58		3.24	14.05	100.12		26.58	325.83	53.45			9.50 Horse hitching. Veterinary Surgeon.	890.17
April,	109.25	27.92	77.70	168.10	16.55	4.20	9.78	91.97	7.47		323.33	2.75			2.05 Stationery.	841.07
May,	77.35	18.44	77.55	159.94		16.88	20.28	72.50	6.42		316.19		$10.00			775.55
June,	66.64	41.26	71.77	180.49	9.50	14.45	13.54	38.61	78.90	58.10	337.57	57.08			33.80 Mercury. Standard. Telephone. Stationery.	1,001.71
July,	97.03	46.51	71.30	140.39	28.45	42.12	3.08	41.65	5.12	11.98	502.33	7.80			15.00 Use of oxen.	1,012.76
August,	75.85	13.45	80.40	136.40	11.85	1.75	22.62	118.02	14.68		336.40					811.42
September,	100.26	86.39	79.73	210.29	18.70	7.41	2.00	41.70	53.04	38.83	341.46	52.51	5.80	$260.91	40.00 Horse hitching. Ice.	1,339.03
October,	96.12	45.85	72.08	153.62		11.38	32.47	86.88	30.38	2.00	371.88	30.84	6.00		1.50 Ice.	941.00
November,	132.90	27.22	89.82	181.08	33.40	16.44	17.95	62.50	7.75	1.95	335.78	1.00	10.65		.45 Stationery.	918.89
December,	81.48	113.20	78.91	196.97	40.54	15.80	30.20	400.39	93.02	48.97	337.42	65.25	4.00	76.53	25.88 Telephone. Stationery.	1,608.56
Totals,	$1081.58	$534.35	$904.33	$2027.95	$210.04	$157.77	$190.07	$1261.64	$351.19	$212.52	$4188.93	$274.68	$36.45	$337.44	$128.93	$11,897.87

STATISTICS OF OUTSIDE RELIEF.

Gross cost of persons outside of Almshouse, 1893,	$30,171.51
Receipts from various sources,	6,890.23
	$23,281.28
Amount paid for support of persons in State lunatic hospitals, and in other cities and towns chargeable to this city,	8,317.75
Leaving as net expenditure in aid of poor, residing here, including State paupers and those chargeable to other cities and towns,	$14,963.53
Number of families aided in 1893,	807
" " settlement here,	377
" " settlement elsewhere,	104
" " State paupers,	326
Number of persons aided,	2,206
" " settlement here, males 383, females, 614.	
" " settlement elsewhere, males 127, females 153.	
" " State paupers, males 433, females 496.	
Average cost of aid to each family, yearly,	$18.54
Average cost of aid to each person, yearly,	6.78

TRANSPORTATION.

Number of families sent to their homes,	33
" persons sent to their homes,	75
" persons sent to State Almshouse,	41

BURIALS.

Males 53, females 41.	94

INSANE.

Number of insane at asylums during the year, males 31, females 29.	
Remaining at city's expense, Dec. 31, 1893,	50
At Taunton Lunatic Hospital,	46
Westborough Insane Hospital,	2
Worcester Insane Asylum,	1
Worcester Lunatic Hospital,	1

PAUPERS AIDED ELSEWHERE,

But having settlement here (exclusive of lunatics), families 15, persons 34.

Amount paid for their support in 1893,	$922.50

ALMSHOUSE REGISTER.

Number remaining December 31, 1892, 79

Months.	Admitted.	Discharged.	Remaining.
January,	6	7	78
February,	7	4	81
March,	4	11	74
April,	5	14	65
May,	8	12	61
June,	10	3	68
July,	2	5	65
August,	10	6	69
September,	9	11	67
October,	12	10	69
November,	18	6	81
December,	5	12	74
Totals,	96	101	

Whole number during the year,	175
Discharged during the year,	101
Remaining, December 31, 1893,	74
Average daily number,	71

PRODUCTS OF FARM FOR 1893.

Hay	113 tons.
Straw,	4 "
Potatoes,	616 bushels.
Oates,	146 "
Barley,	46 "
Beets,	376 "
Carrots,	10 "
Onions,	20 "
Turnips,	246 "
Parsnips,	6 "
Peas,	30 "
String beans,	16 "
Dried beans,	5 "
Sweet corn,	710 doz. ears.
Squashes,	1,325 pounds.
Cabbages,	1,142 heads.
Pork,	5,990 pounds.
Veal,	933 "
Milk,	32,814 quarts.

Celery, tomatoes and cucumbers in abundance.

SUMMARY

Gross expenditure for the year,	$11,897.87
Credits,	2,081.92
	$9,815.95
Average yearly expense of each inmate, including persons committed to the workhouse,	$107.86
Average monthly expense,	8.98
Average weekly expense,	2.07

WORKHOUSE REGISTER.

Number remaining December 31, 1892, 15

Months.	Admitted.	Discharged.	Remaining.
January,	0	0	15
February,	2	1	16
March,	4	1	19
April,	3	3	19
May,	2	7	14
June,	4	2	16
July,	6	2	20
August,	4	4	20
September,	6	4	22
October,	3	1	24
November,	5	1	28
December,	2	3	27

Whole number during the year,	56
Discharged during the year,	29
Remaining December 31, 1893,	27
Average daily number,	20

REPORT

OF THE

PHYSICIAN TO THE BOARD OF OVERSEERS OF THE POOR,

FOR THE YEAR ENDING DECEMBER 31, 1893.

GENTLEMEN:—During the year I have made 1455 house visits, had 816 office calls, visited Almshouse 104 times.

I have reported 17 births and 51 deaths; 19 of the deaths occurred at Almshouse.

This has been a very hard year for the poor. Much sickness, coupled with the hard times and inability to obtain work, has caused a great deal of suffering. Many of the sick have been taken to the Almshouse, where the care has been most satisfactory. The hospital accommodations and nursing there are a great benefit to our sick poor.

I am greatly indebted to the district nurse for her valuable services to my patients during the year, and to many others who have helped make the sick comfortable.

My associations with the department have been most pleasant, and I am ever grateful to the Board for its cordial treatment.

Very respectfully,

WILLIAM G. POTTER,

Physician to Board.

In Board of Aldermen,
May 31, 1894.

Received, ordered printed in the City Documents, and sent down for concurrence.

D. B. LEONARD,
City Clerk.

In Common Council,
May 31, 1894.

Concurred.

WILLIAM A. MACKIE,
Clerk.

1893—CITY DOCUMENT NO. 15.

ANNUAL REPORT

OF THE

Inspector of Milk and Provisions

AND

ANIMALS INTENDED FOR SLAUGHTER,

FOR THE

YEAR ENDING DEC. 31, 1893.

NEW BEDFORD:
EVENING JOURNAL COMPANY, PRINTERS TO THE CITY.
1894.

REPORT.

To His Honor the Mayor and the Board of Aldermen of the City of New Bedford:

GENTLEMEN.— The report of this office, for the year ending December 31, 1893, is herewith respectfully submitted.

The main question occupying the attention of this office is the procuring for the citizens of New Bedford pure, wholesome milk.

There is no person who realizes the value and great importance of pure milk, both as regards its food value and as a protection against disease, more especially among babes and young children, than the Inspector.

His main duty is to procure this end by whatever method, provided it be honest and legitimate, that in his own experience, and that of others who know the value of what they suggest, seems, under the circumstances, the most promising.

The office was not created, as many over-zealous individuals seem to think, for the mere and exclusive purpose of issuing complaints, but more particularly, if not entirely, for the purpose of securing for the masses pure and rich milk; and the actions of the Inspector have been governed by this motive.

The office is open at all hours, and is visited by the public in all matters relating to the question of milk, provisions and cattle, such as bringing samples of milk for inspection, and entering complaints on various matters, making inquiries, etc.

As I never visit dwellings the only information I have of the character of the family supply is from this source and investigation.

No person need be in doubt about the purity of their milk, when a visit to the office provided by law for the use of the public will give all needed information and assistance.

I have yet to meet a sample of milk which was adulterated in any other form than by skimming and watering.

OPERATIONS OF THE YEAR 1893.

Licenses and Registers granted for the sale of milk and oleomargarine, 279 at 50 cents each,	$139.50
Samples of milk inspected,	650

Have arrested and caused to be convicted one man for selling adulterated milk, after fair warning, and he was fined $50 and costs.

Another, for feeding four cows on swill exclusively, fined $30 and costs.

Another, for feeding swill and for insufficient shelter, was prosecuted and convicted.

In June, 1892, a law was passed that all milk-producing and other cattle should be inspected quarterly for tuberculosis; this duty also devolved upon me, and the result of my labors is respectfully submitted.

It has been stated that consumption destroys one-sixth of the human race. Consumption and tuberculosis are one and the same disease; the same germ that produces tuberculosis in cattle produces consumption in man. The disease is communicable from a diseased man to a healthy animal, and from a diseased animal to a healthy human being.

The malady is conveyed from an affected animal to mankind through the milk or the meat used as food. It is because of this incontestible but rather recently appreciated fact that so much of an endeavor is now being made to rid the State of tuberculous cattle.

I have killed and caused to be buried five diseased cows during the year, whose milk was all consumed by the inhabitants of New Bedford; have also quarantined many others while sick from different causes.

It having come to the knowledge of the State Cattle Commissioners that tuberculosis is suspected to exist among swine, I am requested to inspect the carcasses of all swine butchered within this district.

Respectfully submitted,

DR. D. C. ASHLEY,

Inspector.

In Board of Aldermen,
January 4, 1894.

Received and ordered printed in the City Documents, and sent down for concurrence.

D. B. LEONARD,
City Clerk.

In Common Council,
1 mo. 4, 1894.

Concurred.

WILLIAM A. MACKIE,
Clerk.

1893—CITY DOCUMENT NO. 16.

VALEDICTORY ADDRESS

OF THE

HON. JETHRO C. BROCK,

MAYOR,

Delivered on the Evening of Dec. 28, 1893,

BEFORE THE

CITY COUNCIL.

NEW BEDFORD:
EVENING JOURNAL COMPANY, PRINTERS TO THE CITY.
1894.

In City Council in Convention,
Dec. 28, 1893.

Ordered printed in the City Documents.

D. B. LEONARD,
City Clerk.

VALEDICTORY ADDRESS.

Gentlemen of the City Council:

I thank you most heartily for the kind expression conveyed in the resolution just passed. It is a pleasant thought that after being associated together for a year, men of different ideas and opinions, differing in many ways on public questions, we can separate and throw off our official mantles, each with the kindest feelings toward the other. While we have sometimes differed on questions under consideration, it has been an honest difference, and with a desire on the part of each to do that which would result in the greatest good for the city.

Whatever criticisms may be indulged in relative to the City Government of 1893, it must always be admitted that no previous government ever devoted so many hours to the business of the city, or ever displayed a less selfish, personal, or political interest. It has been to me a great pleasure to be associated with a body of men who appeared at all times to be working together solely to promote the city's interests, and always ready to devote all the time necessary to faithfully transact its business.

The vast amount of work accomplished by this administration can hardly be realized at the present time. The administration came into power under peculiar circumstances. The laxity with which the laws had been enforced for a considerable period had at last so exasperated the citizens that they had come

to think that question paramount to all others, and that with the finances became the issue in the campaign. I accepted the nomination with the clear and distinct understanding that I was expected to enforce the law, whatever that law might be, by the expression of the voters at the polls. How well I have carried out that pledge it is not necessary for me to say, as it has now become a matter of history. While my views have always been pronounced against licensing the saloon, and were never stronger in that direction than at the present time, yet when I took the office of Mayor I realized that my duty to the citizens and my obedience to my oath of office were paramount to my personal views.

The proper enforcement of the laws required a complete reorganization of the police force, a work under the then existing circumstances requiring much thought and labor. The result, however, has happily compensated for the effort, and I am able to say to-night, without fear of contradiction, that the force is not excelled for efficiency and discipline by one of its size in any city. The reorganization of the force necessitated the appointment of a new Chief, and, being unable to secure a suitable person in this city, I offered the position to George Douglass of Gloucester, and was fortunate in having him accept the trust. His administration of the office has been one of marked success. He has shown himself a man of fine administrative ability, cool, courageous, and possessing rare tact in dealing with all the difficult problems of the office. He has the confidence and support of the officers and patrolmen to a remarkable degree, and I am convinced I made no mistake in my selection. The efficiency of the force has also been increased by adding to the number of patrolmen.

The finances of the city have required your constant care, and in this connection I wish to bear testimony to the faithful and laborious work of your excellent finance committee. A new departure has been taken this year in the matter of itemized appropriations, and with the great growth of our city, and

corresponding increase in our municipal expenses, I am satisfied this is a move in the right direction, and I hope to see it continued in the future. It is not necessary for me to dwell on the cost of maintaining the several departments of the city, the close calculations that have to be made to provide funds sufficient for all the demands, for with these things you are quite familiar.

I had hoped to have seen some change this year in the Assessors' department, which would result in more equal taxation and an increased revenue.

One excellent act of the Council has been the contracting for the plotting of the city, and we expect that when this is completed it will be an aid of great value in bringing about this much desired result of equal taxation.

During the year we have passed through one of the most serious financial panics ever known, and while business of every kind felt its disastrous influence, it was particularly embarrassing to municipalities, and many of the cities were compelled to stop public work for the want of funds. We were fortunate, however, above some of our neighbors. Realizing the approach of the storm, by a bold and timely movement we secured within one week five loans aggregating $145,000, and were thereby enabled to keep all our work moving and every laborer employed.

During the year you have created several new and important offices, viz.: Inspector of Buildings, City Land Surveyor, Assistant City Clerk, Assistant Overseer of the Poor, and a Cemetery Commission; and these have been filled by men of rare ability for their several positions. You have appropriated for and have in course of construction a beautiful school building on Madison street, and an addition to the Acushnet avenue school building, doubling its capacity. These were absolutely necessary, as will be the construction of at least two new buildings the coming year. You have also appropriated for and have nearly completed a splendidly arranged

engine house on Acushnet avenue, and have appropriated and contracted for a new steam fire engine of the La France pattern for the new house on Hillman street. You have also provided an increased supply of rubber covers for the Protecting Society.

The completion of the new house on Acushnet avenue will call for the purchase of still another steamer. The city will then have a splendid set of fire apparatus, and its property owners can feel that they are well protected. There is one thing more, however, in the way of apparatus we should have, to be in line with other cities, and that is a first-class chemical engine. The saving in incipient fires from damage to property by water would amount to thousands of dollars, while in the wear of ordinary hose it would also effect a great saving. With this added to the department, and the keys at the side of the boxes as in other cities, so that alarms can be given without any delay, we can then boast of a perfect department.

In the purchase of the new steamer I am glad the committee has shown itself to be in the line of progress. While the Amoskeags have done good service in our city in the past, it must be acknowledged that there are good points in other makes, and it's well to occasionally get out of the ruts and look for improvements.

For several years the Board of Public Works has attracted more attention and caused more discussion than any other department. It is a somewhat remarkable fact that in the recent campaign this important branch of the public service was entirely lost sight of, being completely overshadowed by the silly issues trumped up for purely political purposes. When I took my office a year ago I realized the great dissatisfaction existing in the community relative to the subject, but was myself unprejudiced in the matter. I had no recommendations to make, but treated the subject in a way that I felt would awaken such discussion as would enable the City Government to obtain a clear idea of what was needed to remedy any real or

supposed evils. In this I was disappointed. When the subject came up for your consideration no plan was proposed which would unite the two branches in an effort to seek legislation. The Aldermen did nothing, while the Council appointed a committee of its own and went to the Legislature. Under such circumstances it was not to be expected that anything could be accomplished, and to-day the matter stands precisely as it did a year ago. There are questions connected with the subject as to the duties, powers, etc., of the Board, which belong more properly to legal and legislative minds, and I will not refer to them. There is, however, one phase of the question which I would like to refer to. In doing so I wish it distinctly understood I criticise methods only, and not men, for I have the highest regard for the estimable gentlemen comprising the Board. My criticism is this: Membership in the Board has thus far been simply an honorary position, and made up of three busy business men, serving without compensation. I believe thoroughly in a continuous board to manage the highway and sewer departments. I do not believe that the work could possibly be properly attended to in a city of the size of New Bedford under the old plan, by the Board of Aldermen changing each year, as they are liable to do, and my opinion is it would be a very great improvement to have a paid board, who could devote all the time necessary to thoroughly master the entire work of the department. The Board should organize with a chairman and secretary, should be thoroughly informed at all times of the financial condition of the department, its expenditures as well as its receipts, should develop a systematic plan of street improvements, sewers, etc., and then direct its superintendent to carry out *its* plans. Under the present system, or lack of system, instead of having our main through thoroughfares well macadamized and in perfect order, we have good, bad, and indifferent roadways on the same streets. We had better have our main avenues in perfect order

than try to spread over so much territory and have none satisfactory to our citizens.

Theoretically, it is a good idea to have the Mayor and President of the Council members ex-officio of the Board, but this I consider of little consequence compared with the regular members being thoroughly organized and informed as to the needs of the department, and themselves directing its affairs. The salaries paid these officials, I think, could be saved many times over by an experienced and economical management. After investigation by a committee of the Council and advice from the City Solicitor, a new method has been adopted for keeping the records of the Board. During the year a vast amount of work has been accomplished by this department. A number of important streets have been accepted. Rockdale avenue, which is destined in a few years to be one of the finest avenues in the city, has been accepted eighty feet wide from Kempton street to Allen street, and from Dartmouth street to the Cove, and action has been taken looking to the widening of the intervening space. The City Land Surveyor has also been instructed to define the metes and bounds for the widening of this avenue to eighty feet from Kempton street to the Hathaway road, and for laying it out from the Hathaway road to the junction of the Plainville road and Shawmut avenue. The Middle Point road has also been accepted eighty feet wide from West French avenue to the United States government property. Kempton street, from Rockdale avenue to the Dartmouth line, has been laid out eighty feet wide, and a hearing had, preparatory to its acceptance.

A large amount of sewer work has been done, including the lowering of the Union and William street sewers, and the construction of the Davis street sewer.

A large portion of Acushnet avenue has been block paved, for which purpose you appropriated the sum of ten thousand dollars. Similar appropriations should be continued each year until block paving is substituted in all the business streets for

the unsuitable and unsatisfactory cobble. The great change in the business of the city to that of manufacturing has brought with it a much heavier class of teaming and requires the best form of paving.

During the year you have considered the question of a new water supply, and by an appropriation of $3,400 competent engineers have carefully studied the situation, and their exhaustive report and estimates have been presented to the Council for its consideration.

The subject of a new bridge has also received great attention. A bill was procured from the Legislature and several plans have been made, and on them two public hearings have been had. As a result of these hearings, the County Commissioners are now having prepared a final plan of a steel grade bridge seventy feet wide.

The question of a new bridge has brought with it a discussion of the abolishment of grade crossings, and at a recent meeting of the Council an appropriation was made for the employment of a competent engineer to examine and report on the subject to the Council. John D. Fouquet of New York, a distinguished railroad engineer, has been employed for the purpose, and you have just had the privilege of listening to his conclusions.

You have during the year passed several important ordinances, as follows:

An ordinance entitled "An ordinance amending Section 20 of Chapter 23 of the ordinances of the city relative to authorizing expenditures after the annual appropriations." Passed May 23, 1893.

"An ordinance repealing an ordinance establishing the offices of Superintendent of the Almshouse, Superintendent of the Poor Farm, and Physician to the Board of Overseers of the Poor." Passed Sept. 14, 1893.

"An ordinance relative to the erection of buildings within the limits of the City of New Bedford, and defining the duties of the Inspector of Buildings with respect thereto." Passed Sept. 14, 1893.

"An ordinance relating to cemeteries." Passed Nov. 9, 1893.

"An ordinance providing for the storage and keeping of dynamite, nitro-glycerine, gun cotton, or other explosive compounds within the limits of the City of New Bedford." Passed Nov. 23, 1893.

"An ordinance concerning sprinkling of gravel, salt, sand, or other articles on the tracks of street railways." Passed Nov. 23, 1893.

"An ordinance concerning the removal of snow and ice by street railway companies." Passed Nov. 23, 1893.

"An ordinance relative to the disposition of certain moneys in the City Treasury." Passed Dec. 8, 1893.

"An ordinance defining the duties of City Land Surveyor." Passed Dec. 8, 1893.

"An ordinance amending an ordinance relating to the election of Commissioners of the Sinking Funds." Passed Dec. 28, 1893.

The old custom of having the two principal officers of the police department present at the meetings of the Council to act as messengers has been abolished.

In the above summary of the work done it must be evident to all observers that this has been a working Council, and whatever may be the present estimate the future will give it due credit.

In closing, I wish to thank you one and all for your assistance during the year. Never having occupied a seat in either branch of the City Government, and being unfamiliar with city affairs, I have appreciated the very hearty support you have accorded me.

I wish to thank the City Clerk for his kind assistance at all times, as well as the heads of other departments, and in this I wish to include the faithful and efficient City Messenger.

We have to be thankful that death has not entered our ranks, that for the most part we have been exempt from sickness, and for these and other blessings we are under renewed obligations to our Heavenly Father, who doeth all things well.

City of New Bedford.

ORDINANCES.

In the Year One Thousand Eight Hundred and Ninety-three.

AN ORDINANCE

Repealing an Ordinance Establishing the Offices of Superintendent of the Almshouse, Superintendent of the Poor Farm and Physician to the Board of Overseers of the Poor.

Be it ordained by the City Council of the City of New Bedford, as follows:

Section 1. An ordinance passed June 9, 1892, and entitled "An ordinance establishing the office of Superintendent of Almshouse, Superintendent of Poor Farm, and Physician to the Board of Overseers of the Poor," is hereby repealed.

Section 2. This ordinance shall take effect upon its passage.

In Common Council, 9 mo., 14, 1893.

Passed to be ordained.

WILLIAM T. TAYLOR, Pres. pro tem.

In Board of Aldermen, Sept. 14, 1893.

Passed to be ordained.

J. C. BROCK, Mayor.

Approved, Sept. 16, 1893.

J. C. BROCK, Mayor.

A true copy.

Attest: D. B. LEONARD,
City Clerk.

City of New Bedford, in the Year 1893.

ORDINANCE

Relative to the Erection of Buildings Within the Limits of the City of New Bedford, and Defining the Duties of the Inspector of Buildings with Relation Thereto.

Be it ordained by the City Council of the City of New Bedford, as follows:

Sect. 1. It shall be the duty of the Inspector of Buildings to inspect the construction of all buildings within the city limits. He shall keep in a book kept for the purpose a record containing a general description of said buildings. He shall endorse his approval or disapproval upon all applications to build, alter, add to, or move any buildings within the fire limits of said city, and shall report the same to the committee on buildings, and shall make a monthly written report of all his doings to said committee. He shall serve as the clerk of said committee, and perform such clerical duties as may be required of him.

Sect. 2. The Inspector of Buildings shall have an office which shall be provided by the City Council, at which he shall be daily present at stated hours to be designated by the committee, and duly advertised where and when plans and specifications of buildings to be erected or altered within the city limits shall be submitted for his approval. Upon his approval of plans and specifications of buildings to be erected, he shall issue his permit for the erection, alteration and moving thereof, a copy of which shall be recorded by him in a book kept for the purpose. In case of refusal by the Inspector of Buildings

to approve plans or specifications and to issue a permit as above provided, the applicant shall have a right of appeal from the decision of the Inspector to the committee on buildings. Notice of such appeal shall be given in writing to the Inspector within three days from the announcement of his refusal to approve, which notice he shall thereupon file with the committee together with the plan, specification and all other papers relating thereto. The committee shall hear both the applicant and the Inspector and upon due consideration shall approve or reverse the decision of the Inspector in writing and the papers shall then be returned to the office of the Inspector. In case the decision of the Inspector shall be reversed the committee, by the chairman, shall sign the permit, which shall have the same force and effect as if signed by the Inspector. A failure to act with reasonable diligence upon any application shall be regarded as a ground for removal.

SECT. 3. In full compensation for all the services of the Inspector of Buildings he shall receive such salary as the City Council may from time to time fix and determine.

SECT. 4. No person shall erect, alter, add to or move any building within the limits of the city except in accordance with the foregoing provisions, and the provisions of chapter 12 of the ordinances of the city and the amendments thereof.

The last clause of section 2 of chapter 12 of the ordinances of the City of New Bedford relating to buildings in the fire district is hereby amended so that the same shall read:

"And no person shall erect a building or make any addition to any building already erected, whether within the fire limits established by this section or not, unless he shall upon written application first obtain permission so to do in accordance with the provisions of this ordinance; and no moving of buildings except so far as the same are under the jurisdiction of the Board of Public Works in any portion of the city shall be permitted without the consent of the Inspector of Buildings and upon application therefor as hereinafter provided."

Section 3 of said chapter 12 of the ordinances of the City of New Bedford is hereby amended so that the same shall read as follows:

"All applications to build, alter, add to, or remove any buildings within said City of New Bedford, except so far as the same are under the jurisdiction of the Board of Public Works, shall be presented to the Inspector of Buildings who shall endorse thereon his approval or disapproval of the applications, and may grant such applications upon such terms, conditions, and regulations as he deems proper."

SECT. 5. The Inspector of Buildings shall order all persons engaged or assisting in the erection, alteration, addition, or removal of any buildings in violation of or without compliance with the terms of this ordinance to forthwith cease operations, or to forthwith remove or cause to be removed any building so being erected, altered or moved in violation of the terms of this ordinance, if in his judgment the public safety shall require it.

SECT. 6. Any person failing to comply with the order of the Inspector of Buildings, as set forth in the preceding section, shall be liable to arrest by any police officer or constable without a warrant, and be detained until a warrant and complaint can be issued in due form.

SECT. 7. It shall be the further duty of the Inspector of Buildings to take general charge of the erection of all buildings erected by the City of New Bedford, including those now in process of erection; to endorse thereon in writing his approval or disapproval of all specifications forming a part of any building contract submitted to him by the committee on city property, with his objections thereto, if any, and make report of the progress and manner of construction of all buildings being erected by the city, at such time as the committee on city property shall require. It shall also be his duty to cause the prompt removal of all work or material which shall not be in accordance with the terms of any contract under which any building

is in progress of erection, alteration or removal, and to report to the committee forthwith any violation of said contract; provided, however, that nothing in this section shall be construed to prevent the committee on city property from making a special contract with any person to superintend the construction of any building to be erected by the city, and in case of such special contract, notice thereof being first given to the Inspector of Buildings he shall be relieved from all duties as to such buildings as are provided for in such special contract.

SECTION 8. This ordinance shall take effect upon its passage.

IN COMMON COUNCIL, 9 mo., 14, 1893.

Passed to be ordained.

WILLIAM T. TAYLOR, Pres. pro tem.

IN BOARD OF ALDERMEN, Sept. 14, 1893.

Passed to be ordained.

J. C. BROCK, Mayor.

Approved Sept. 16, 1893.

J. C. BROCK, Mayor.

A true copy.

Attest: D. B. LEONARD,
City Clerk.

CITY OF NEW BEDFORD,

In the Year Eighteen Hundred and Ninety-three.

AN ORDINANCE

RELATING TO CEMETERIES.

Be it ordained by the City Council of the City of New Bedford, as follows:

SECT. 1. Upon the passage of this ordinance there shall be elected by the City Council in convention, three persons to constitute a Cemetery Board; one to hold office until the first day of May in the year eighteen hundred ninety-four, one until the first day of May in the year eighteen hundred ninety-five, and one until the first day of May in the year eighteen hundred ninety-six, and until their successors are elected and qualified; and thereafter in the month of April in each year the City Council shall in like manner elect one member of said Board to serve for a term of three years from the first day of May in the year in which he shall be elected and until his successor is elected and qualified; but the Mayor with the consent of the City Council in convention, may at any time remove any of said Board. Whenever any vacancy shall occur in said Board by death, resignation or otherwise, said vacancy shall be filled by election in the manner aforesaid of another person, who shall hold office for the residue of the unexpired term.

SECT. 2. Within ten days from the first election and qualification of the members of said Board under this ordinance, and thereafter annually on the first Monday of May, said Board shall organize by the choice of a chairman and secretary from their own number, and may make such

rules and regulations relating to their organization and meetings, not inconsistent with law and ordinance, as they deem advisable.

SECT. 3. The members of said Board shall receive such compensation for their services as the City Council may from time to time determine.

SECT. 4. The several cemeteries belonging to the city shall be under the sole care, superintendence and management of said Cemetery Board; they shall set apart and appropriate a suitable portion of said cemeteries as a public burial place for the use of the inhabitants of the city, free of charge; they shall lay out said cemeteries in suitable lots or other sub-divisions for burials, with necessary paths and avenues, and shall at all times provide a sufficient number of such lots of various classes and prices in a condition for immediate use and sale; they shall keep said cemeteries in good order and repair and may plant and embellish the same with trees, shrubs and flowers, and other rural ornaments.

Nothing contained in this ordinance, however, shall be deemed to authorize said Board to incur any liability in the name of the city for an amount greater than that appropriated by the City Council for cemeteries.

SECT. 5. Said Board shall, subject to the approval of the City Council, make and publish such rules and regulations in relation to the use and management of said cemeteries, not inconsistent with law or ordinance, as they deem advisable.

SECT. 6. Said Board may negotiate sales, upon such terms and to such persons as it deems proper, of exclusive rights of burial, in any lot not already sold or occupied in any of the public cemeteries, provided no such right be sold in more than one lot to any one person. And said Board shall, upon receipt of an order from the City Treasurer, reciting that he has received payment therefor, grant to such persons exclusive rights of burial in such lots, by an instrument duly executed by its Chairman and Secretary upon such terms and conditions as

the City Council may from time to time prescribe, and shall, before delivery thereof, cause said instrument to be recorded by its Secretary in books to be kept in the office of the City Clerk.

SECT. 7. The Secretary of said Board shall keep suitable books in which he shall enter full records of all lots in every public cemetery, giving the name and address of the persons entitled to the right of burial in said lots, and of all transfers of the same, and also the place of every grave in said cemetery, and the name of the person buried in said grave, and shall cause to be prepared and from time to time corrected, an accurate plan or plans of every public cemetery showing every lot and every grave therein, to be used in connection with said records. The Secretary shall also keep records of the transactions of said Board in relation to the sale and conveyance of burial rights, and all other transactions of said Board.

SECT. 8. Said Board shall give to any person making a deposit under the terms of section 17 of chapter 82 of the Public Statutes of the Commonwealth or any acts in amendment thereof, upon receipt of an order from the City Treasurer, reciting that he has received such deposit, an agreement or obligation of the city in the following form:

CITY OF NEW BEDFORD,
A. D. 18

This is to certify that has this day deposited with the Treasurer of the City of New Bedford the sum of dollars, and said city hereby agrees to carefully invest said sum and apply the net income thereof for the preservation and care of lot number on the plan of the cemetery.

Cemetery Board.
by

The Treasurer shall deposit all sums received by him under the provisions of this section in some Savings Bank or Institution for Savings in this Commonwealth, in such manner as shall show the name of the person from whom and the lot for which the same was received. He shall keep books in which he shall enter full details of such investments. He shall collect the income of said investments and properly credit the same on his books. He shall annually on the first day of May and on the first day of November transmit to said Cemetery Board a detailed statement of the amounts standing to the credit of each lot for which said deposits have been made under the provisions of this section.

It shall be the duty of said Board to apply the income of said investments for the preservation and care of the lot for which said deposits have been made, and also all sums held by the city and otherwise applicable to the care of particular lots in both public and private cemeteries.

Sect. 9. Annually in the month of May said Board shall nominate, subject to confirmation by the City Council in convention, a superintendent of the Rural Cemetery and a superintendent of the Oak Grove Cemetery. Said superintendents shall severally hold their offices for one year, or until their successors are chosen, subject to removal by said Board. Whenever any vacancy shall occur in the office of either of said superintendents, by death, resignation, or otherwise, said vacancy shall be filled by nomination and confirmation in the manner aforesaid, of another person, who shall hold office for the residue of the unexpired term. The compensation of each superintendent shall be fixed by the City Council. Each of said superintendents shall devote his whole time to the care of the cemetery placed under his charge, and to such other cemetery or public burial place as shall be placed under his charge by said Board, and shall in all matters act under the supervision and direction of said Board.

Said superintendent shall keep accurate books of account in such manner as said Board shall direct, and shall deposit at least as often as once each week with the City Treasurer all moneys received by them.

SECT. 10. All accounts and claims against the city for expenditures for cemeteries shall be examined by the superintendents of the respective cemeteries, and approved by said Cemetery Board. At least once a month said Cemetery Board shall cause to be prepared and transmitted to the City Auditor bills for all work and material furnished by said Board to individuals and not already paid for, or for the preservation and care of lots under the provisions of section 8 of this ordinance, which bills shall be presented by the Auditor to the committee of audit, and shall be by them carefully examined. If said bills are approved by the committee of audit, they shall certify to the same and cause said bills to be forthwith transmitted to the City Treasurer. It shall be the duty of the Treasurer to charge the amounts of all bills for the preservation and care of lots under the provisions of section 8 of this ordinance, to the amount standing to the credit of said lots respectively, and to promptly collect the amounts of all bills against individuals.

The proceeds of all sales of burial rights received by the City Treasurer shall be kept separate and apart from all other funds and be appropriated to reimburse the city for the cost of land purchased or acquired by the city for cemetery purposes, or of the improvements and embellishments thereof.

All moneys received by the City Treasurer from the Superintendent of Cemeteries, or from individuals for work and materials furnished by the Cemetery Board, together with all amounts charged for the care of lots under the provisions of section 8 of this ordinance, as aforesaid, shall be regarded as unappropriated money in the city treasury, and shall be credited to the account of "Unappropriated Funds."

SECT. 11. Annually in the month of January said Board shall prepare and transmit to the City Auditor a detailed estimate of the amounts required to be appropriated for cemeteries for the current year, together with the estimates of the amounts required to be expended under the provisions of section 8 of this ordinance, and also estimates of the amounts of probable receipts in connection with the cemeteries.

SECT. 12. Chapter XIX of the ordinances, and all ordinances and parts of ordinances inconsistent herewith, are hereby repealed.

SECT. 13. This ordinance shall take effect upon its passage.

IN COMMON COUNCIL, 11 mo., 9, 1893.

Passed to be ordained.

SAM'L C. HART, President.

IN BOARD OF ALDERMEN, Nov. 9, 1893.

Passed to be ordained.

J. C. BROCK, Mayor.

Approved Nov. 9, 1893.

J. C. BROCK, Mayor.

A true copy.

Attest: D. B. LEONARD,

City Clerk.

In the Year Eighteen Hundred and Ninety-Three.

AN ORDINANCE

Concerning Sprinkling of Gravel, Salt, Sand, or Other Articles on the Tracks of Street Railways.

Be it ordained by the City Council of the City of New Bedford, as follows:

Sect. 1. No street railway company shall, except by permission of the Board of Public Works, sprinkle any gravel or sand, or any salt or other article of a decomposing nature, on the tracks or rails in a street, or wash such tracks or rails with brine or pickle.

Sect. 2. Whoever violates any provision of this ordinance shall be punished by a fine not exceeding twenty dollars for each offense, and not only the person actually doing the prohibited thing, but also his employer and every person concerned in so doing shall be punished by the said fine; also for a second offense, each and every person concerned in so doing shall be punished by a fine of one hundred dollars.

Sect. 3. This ordinance shall take effect upon its passage.

In Common Council, 11 mo., 23, 1893.
Passed to be ordained.

SAMUEL C. HART, President.

In Board of Aldermen, Nov. 23, 1893.
Passed to be ordained.

J. C. BROCK, Mayor.

Approved, Nov. 24, 1893.

J. C. BROCK, Mayor.

A true copy.
Attest: DANIEL B. LEONARD,
City Clerk.

In the Year Eighteen Hundred and Ninety-Three.

AN ORDINANCE

CONCERNING THE REMOVAL OF SNOW AND ICE BY STREET RAILWAY COMPANIES.

Be it ordained by the City Council of the City of New Bedford, as follows:

SECT. 1. Every street railway company which shall shovel, or by means of snow ploughs, or any other device, place, deposit, or in any manner encumber the streets outside of its rails with snow or ice removed from within its rails, shall immediately proceed to remove such snow and ice from the streets so encumbered and prosecute said removal without delay to final completion.

SECT. 2. Every street railway company which unreasonably neglects or refuses to comply with the provisions of this ordinance shall be punished by a fine not exceeding twenty dollars for each offense committed in each and every street so encumbered, and twenty dollars additional for each and every day such street is thereafter encumbered.

SECT. 3. This ordinance shall take effect upon its passage.

In Common Council, Nov. 23, 1893.
Passed to be ordained.

SAM'L C. HART, President.

In Board of Aldermen, Nov. 23, 1893.
Passed to be ordained.

J. C. BROCK, Mayor.

Approved, Nov. 24, 1893.

J. C. BROCK, Mayor.

A true copy.
Attest: DANIEL B. LEONARD,
City Clerk.

CITY OF NEW BEDFORD,

In the Year 1893.

AN ORDINANCE

PROVIDING FOR THE STORAGE AND KEEPING OF DYNAMITE, NITROGLYCERINE, GUN COTTON, OR OTHER EXPLOSIVE COMPOUNDS WITHIN THE LIMITS OF THE CITY OF NEW BEDFORD.

Be it ordained by the City Council of the City of New Bedford, as follows:

SECT. 1. No person shall keep or store any dynamite, nitroglycerine, gun cotton, or other explosive compound except gunpowder, within the limits of the City of New Bedford, without being licensed therefor by the Mayor and Aldermen upon the recommendation of the Chief Engineer of the Fire Department.

SECT. 2. Upon written application the Board of Mayor and Aldermen may issue licenses to store and keep explosive compounds mentioned in Section 1 upon such terms and conditions as they shall deem reasonable and proper and in accordance with such regulations as they from time to time may make in respect to the same. Provided, however, that no license shall be issued for the keeping or storing of the explosive compounds mentioned in Section 1, within twenty feet of any building which is regularly occupied during any portion of the day or night, or in larger amounts than are herein named, viz.:

Of nitroglycerine and all compounds thereof, and of gun cotton, four ounces.

Of detonators or exploders for use with any explosive compound other than gunpowder, such number as shall contain in all one-half pound of the detonating compound employed.

Of any explosive compound not otherwise provided for, such amount not exceeding ten pounds, as the Board of Aldermen may deem safe.

SECT. 3. None of the explosive compounds mentioned in Sect. 1 shall be transported through the streets of the city except in such manner and in such quantities as the Board of Aldermen may from time to time prescribe.

SECT. 4. Any violation of this ordinance, or of any regulation of the Board of Aldermen made under the preceding section, shall be punished by a fine not exceeding twenty dollars for each offense.

IN BOARD OF ALDERMEN, May 25, 1893.

Passed to be ordained.

J. C. BROCK, Mayor.

IN COMMON COUNCIL, 11 mo., 23, 1893.

Passed to be ordained.

SAM'L C. HART, President.

Approved Nov. 27th, 1893.

J. C. BROCK, Mayor.

A true copy.

Attest: DANIEL B. LEONARD,
City Clerk.

City of New Bedford,

In the Year One Thousand Eight Hundred and Ninety-three.

AN ORDINANCE

Relative to the Disposition of Certain Moneys in the City Treasury.

Be it ordained by the City Council of the City of New Bedford, as follows:

Section 1. All receipts into the city treasury from all sources, except where otherwise provided by law or ordinance, shall be regarded as unappropriated funds.

Section 2. Section fourteen of chapter twenty-three of the ordinances is hereby repealed.

Section 3. This ordinance shall take effect upon its passage.

In Board of Aldermen, Dec. 8, 1893.
Passed to be ordained.
J. C. BROCK, Mayor.

In Common Council, 12 mo., 8, 1893.
Passed to be ordained.
SAM'L C. HART, President.

Approved, Dec. 9, 1893.
J. C. BROCK, Mayor.

A true copy.
Attest: DANIEL B. LEONARD,
City Clerk.

City of New Bedford,

In the Year One Thousand Eight Hundred and Ninety-three.

AN ORDINANCE

Defining the Duties of City Land Surveyor.

Be it ordained by the City Council of the City of New Bedford, as follows:

Sect. 1. The City Land Surveyor shall have charge of all matters relating to surveying and civil engineering in connection with the business of the city. His department shall be called the Engineering Department. He shall devote his whole time to the service of the city, and shall hold no other office under the City Government or any department thereof. He shall receive in full compensation for all his services such salary as the City Council may from time to time fix and determine.

Sect. 2. It shall be the duty of the City Land Surveyor to make and present such surveys, plans, delineations, statements, estimates, and reports in relation to the grading, laying out and altering of streets and sewers, and do such other work proper to be performed by a surveyor or civil engineer in relation to the business of the city as may be required by the Mayor, the City Council, or either branch thereof, or any committee thereof, or of any department or board of the city. He shall make such corrections and changes in the Assessors' plats as may be required by the Board of Assessors. He shall keep a record, alphabetically arranged, of all highways in the city.

SECT. 3. The City Land Surveyor may furnish to persons about to build any structure within the city, the line and grade of the street or streets adjacent to such structure, and may, in connection with the Inspector of Buildings, make such rules and regulations in relation to furnishing such information as may seem to them proper.

SECT. 4. All plans, delineations, estimates, and reports, together with all field books, notes, and other memoranda made by the City Land Surveyor or any of his assistants in connection with their official duties, shall be and remain the property of the city. And it shall be the duty of the City Land Surveyor to preserve the same, properly classified and indexed.

SECT. 5. The City Land Surveyor shall annually in the month of January present to the City Council a report in relation to the engineering department, showing the number of persons employed, the detailed expenses of the department, and any general information in regard to the same that he may deem expedient.

SECT. 6. The City Land Surveyor may from time to time employ such assistants as he shall require in the performance of his duties, with the consent and under the direction of the joint standing committee on roads, bridges, and sewers, and may expend such sums for materials or incidental expenses as may be necessary; provided, however, that all such expenditures for the employment of assistants and for materials and other incidental expenses, and all contracts for the same, shall be limited to the amount actually appropriated by the City Council to the engineering department.

SECT. 7. All expenditures in connection with the engineering department shall be examined by and certified to by the City Land Surveyor, and approved by the chairman of the committee on roads, bridges, and sewers. The committee of audit shall not certify or approve any account or claim against the city for surveying or civil engineering work other than those approved as above, unless the same are especially

authorized by vote of the City Council, or provided for by some special appropriation.

SECT. 8. All ordinances or parts of ordinances inconsistent herewith are hereby repealed.

SECT. 9. This ordinance shall take effect upon its passage.

IN BOARD OF ALDERMEN, Dec. 8, 1893.
Passed to be ordained.
J. C. BROCK, Mayor.

IN COMMON COUNCIL, 12 mo., 8, 1893.
Passed to be ordained.
SAM'L C. HART, President.

Approved, Dec. 9, 1893.
J. C. BROCK, Mayor.

A true copy.
Attest: DANIEL B. LEONARD,
City Clerk.

AN ORDINANCE

AMENDING AN ORDINANCE RELATING TO THE ELECTION OF COMMISSIONERS OF THE SINKING FUNDS.

CITY OF NEW BEDFORD,

In the Year 1893.

Be it ordained by the City Council of the City of New Bedford, as follows:

Chapter LVII of the ordinances relating to the election of Commissioners of the Sinking Funds is hereby amended by adding thereto the following provisions, viz.:

SECTION 2. Said Commissioners shall receive all moneys appropriated and paid by the city on account of all sinking funds established by the city, and shall hold, control, invest and reinvest the same in accordance with the provisions of law.

SECTION 3. Said Commissioners shall, when a debt of the city becomes due, pay over and transmit to the City Treasurer so much of the funds which they may hold as a sinking fund for such debt as may be required for the payment of such debt.

SECTION 4. The City Council may direct that all amounts received as premiums on the sale of bonds or evidences of debt for which a sinking fund is established, shall be added to said sinking fund and paid to said Commissioners.

Whenever the amount of any sinking fund exceeds the entire amount of the debt for the payment of which it was established, the City Council may transfer the amount of said excess to such other sinking fund or funds as it may deem advisable, or may require the amount of said excess to be paid into the city treasury.

SECTION 5. Said Commissioners shall annually in the month of January cause to be prepared and transmit to the City Auditor detailed estimates of the amounts required for the various sinking funds of the city.

SECTION 6. The City Council shall annually appropriate for each sinking fund an amount sufficient, with the accumulations thereof, to meet at maturity the debt for the payment of which it was established, and shall annually appropriate for a debt payable in ten years from the time incurred an amount not less than eight per cent. of such debt; for a debt payable in twenty years from said time an amount not less than three and one-half per cent. of such debt; for a debt payable in thirty years from said time an amount not less than two per cent. of such debt; provided, however, that in case other payments have been applied or transferred to the sinking fund of any debt the City Council may appropriate an amount less by the amount of such payments than would otherwise have been required. All amounts so appropriated shall be payable to the Sinking Fund Commissioners on the first day of November of each year.

SECTION 7. This ordinance shall take effect upon its passage.

IN BOARD OF ALDERMEN, Oct. 26, 1893.

Passed to be ordained.

J. C. BROCK, Mayor.

IN COMMON COUNCIL, 12 mo., 28, 1893.

Passed to be ordained.

SAM'L C. HART, President.

Approved, Dec. 29, 1893.

J. C. BROCK, Mayor.

A true copy.

Attest: DANIEL B. LEONARD, City Clerk.

In the Year Eighteen Hundred and Ninety-Four.

AN ORDINANCE

To Provide for the Disposition of Fees Received by City Officials.

Be it ordained by the City Council of the City of New Bedford, as follows:

Section 1. All fees, charges, and commissions of every kind and description allowed by law to the City Clerk, City Treasurer, Collector of Taxes, or any other official of the City of New Bedford, shall be paid by such official into the treasury of this city and become the property thereof.

Section 2. On or before the fifth day of every month every city official shall pay over to the City Treasurer all fees, charges, and commissions as above set forth, received by him during the preceding month.

Section 3. This ordinance shall take effect March 1, 1894.

In Board of Aldermen, February 21, 1894.
Passed to be ordained.
STEPHEN A. BROWNELL, Mayor.

In Common Council, February 21, 1894.
Passed to be ordained.
JOHN H. BARROWS, President.

Approved, Feb. 27, 1894.
STEPHEN A. BROWNELL, Mayor.

A true copy.
Attest: DANIEL B. LEONARD,
City Clerk.

In the Year Eighteen Hundred and Ninety-Four.

AN ORDINANCE

To Amend an Ordinance Entitled "An Ordinance to Provide for the Disposition of Fees Received by City Officials" Passed February 21, 1894.

Be it ordained by the City Council of the City of New Bedford, as follows:

Section 1. Section 3 of said ordinance is hereby amended by striking out the words and figures "March 1st, 1894," and inserting in place thereof the words "April 1st, 1894."

Section 2. This ordinance will take effect upon its passage.

In Board of Aldermen, March 8, 1894.
Passed to be ordained.
STEPHEN A. BROWNELL, Mayor.

In Common Council, 3 mo., 22, 1894.
Passed to be ordained.
JOHN H. BARROWS, President.

Approved, March 23, 1894.
STEPHEN A. BROWNELL, Mayor.

A true copy.
Attest: DANIEL B. LEONARD,
City Clerk.

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